BRITAIN'S BEST-SELLING MACINTOSH MAGAZINE

MACFORMAT

ISSUE 20 ■ JANUARY 1995 ■ £3.95 WITH HD DISK

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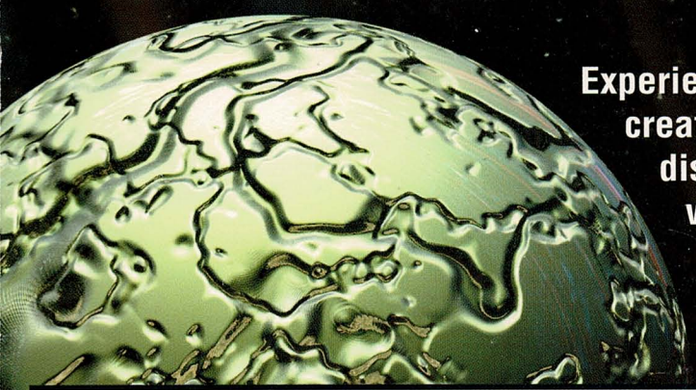
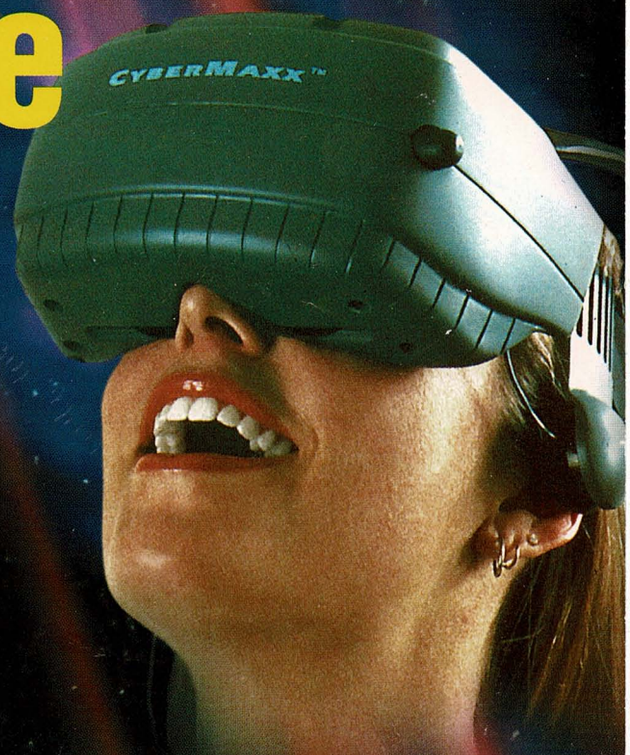
Explore strange new worlds...





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MACFORMAT
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Create your own realistic three-dimensional landscapes in this superb free graphics program. Mountains, seas and sky are at your control!
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One of the all-time classic games just got better! Play this addictive game, then read the author's own account in the magazine of how it's all done.
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Don't just create new worlds, explore them too! With this program you can link pictures together to create a professional interactive walkthrough of any environment.
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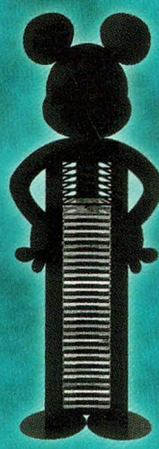

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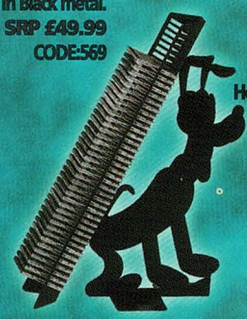

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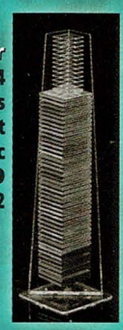

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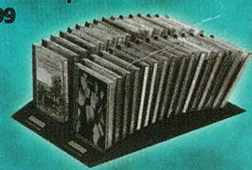

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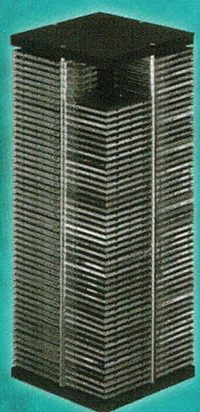

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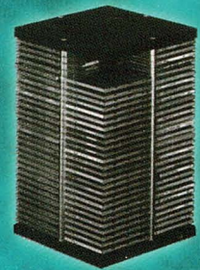

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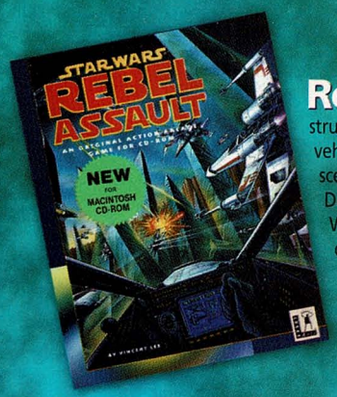
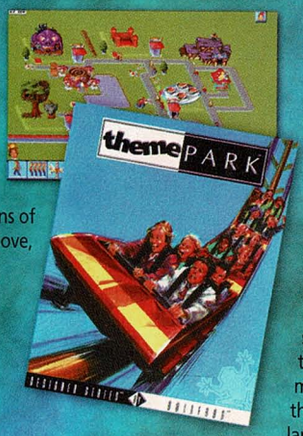
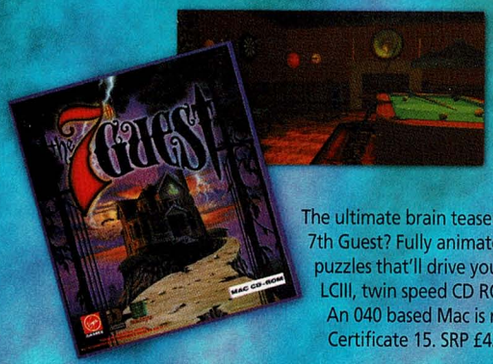
CD ROM ENTERTAINMENT



Rebel Assault Join Rebel pilots in their deadly struggle against the Empire. Take control of any of four Star Wars vehicles in a variety of challenging piloting, targeting and combat scenarios in one of the first games designed especially for CD ROM. Defend Tatooine against Imperial attack, challenge the menacing Walkers on Hoth and combat the Empire in a series of intense deepspace battles. Minimum LCIII, 256 colours and double speed CD ROM recommended.
SRP £42.54

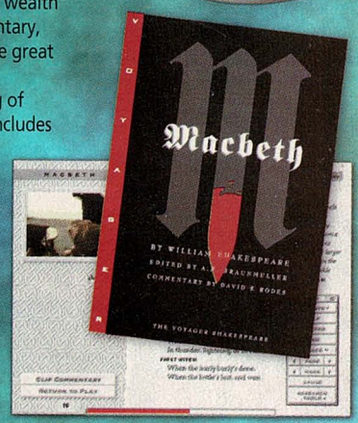


Theme Park Start off with a simple plot of land and build your dream Theme Park. Add shops, staff, rides and compete against the rest of the world. The Enhanced CD version includes 3D animations of all the rides, hours of endless fun! Works in 16 colours and above, all sizes of monitor. SRP £38.29

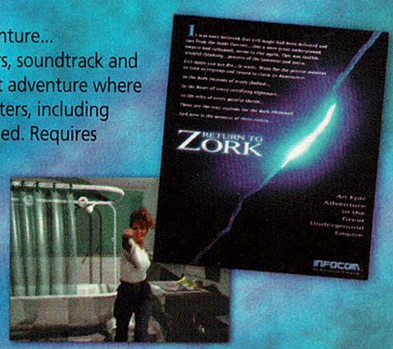


7th Guest
The ultimate brain teaser. Can you solve the mystery of the 7th Guest? Fully animated 3D, music, real actors and puzzles that'll drive you nuts! Minimum requirement is an LCIII, twin speed CD ROM, 256 colours, 13" monitor. An 040 based Mac is recommended. Certificate 15. SRP £42.54

Macbeth This CD ROM offers the text of the great tragedy with a wealth of features—commentary, pictures, movies of the great performances—that transforms the reading of Shakespeare. This CD includes searching and note-taking abilities and many new essays on the history and language of the play. Requires 13" monitor with 256 colours.
SRP £44.00



Return to Zork An epic adventure...
...underground. A CD featuring 3D graphics, actors, soundtrack and some of the toughest puzzles ever. This is the first adventure where you can have 'real' conversations with the characters, including the ability to show emotions. Highly recommended. Requires minimum of LCIII, 13" monitor, 256 colours and double speed CD ROM drive. SRP £42.54



Children don't just read Living Books... they live them.

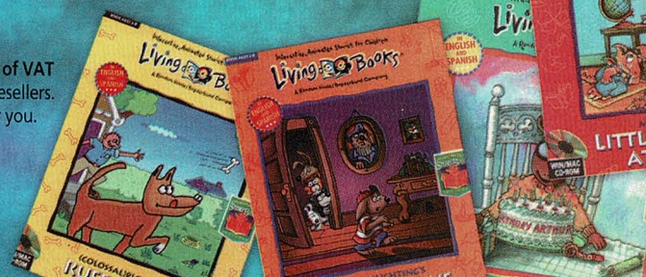
The Living Books are interactive animated stories for children. These award winning CD ROMs let children join in the fun whilst learning. SRP £39.99each.

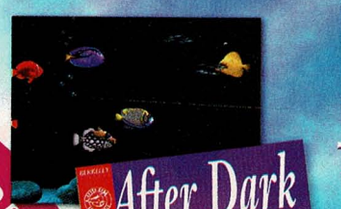
Little Monster at School. Join the Little Monster as he goes off to school to learn about ABCs, numbers, science and other subjects.

Harry and the Haunted House. When Harry hits a curve ball right over Stinky's head, it lands in the spooky old house down the street...

Arthurs Birthday. Rejoin Arthur as he celebrates his Birthday but wait, Muffy's having a Party at the same time. What can Arthur do?

Ruffs Bone. Follow Ruff into a far-flung search for his missing bone. He travels to a distant jungle and ancient ship and...





The Complete After Dark One CD ROM loaded with more than 80 After Dark displays! This single CD contains the new After Dark 3.0 along with the modules from More After Dark and After Dark 2.0. SRP £49.99

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The Finder

MACFORMAT

Welcome again to MACFORMAT, Britain's best-selling Mac magazine! Whether you're a veteran or a novice, we'll bring you news, reviews of affordable and interesting new products, tips and techniques to help you get more out of your Mac, whatever you use it for!

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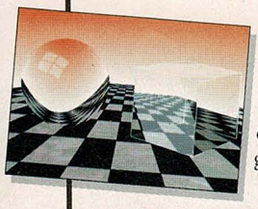
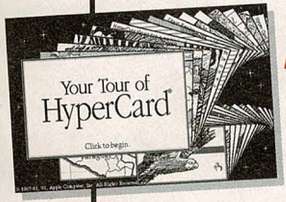


Transparency 58
Making a 'transparent' object look convincing in your Mac artwork is one of the trickiest challenges in illustration. Here's a step-by-step guide to doing it in *your* Mac art package

SPECIAL FONTS OFFER SEE PAGE 29

Comms: Easy Loader 69
Going on-line doesn't just mean being able to exchange e-Mail messages. You can also download shareware and send and receive just about any kind of file. Here's how



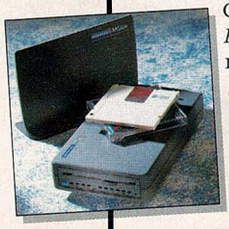
A Better HyperCard? 79
HyperCard is not just a fancy database, it's a complete Mac customiser. It used to come free with all Macs, but the new version costs £150 plus. What more can you do for that money?

Troubleshooting 92
Does your hard disk seem to be grinding to a halt? Your keyboard developing a life of its own? Your mouse in need of a good clean? Here's how to fix your hardware problems

REGULARS

News 17
The shape of Macs to come, budget games, DIY multimedia, even videos on your Mac screen...

MacroScope 25
Get the story behind the stories! Meet the man behind *Painter*, experience the home computer explosion, see more shows with Josef Morrell, and much more...



What's New 32
The hottest new hardware and the strangest new software, from an accelerator for your Quadra, Centris or PowerMac to an aquarium simulator

Apple Talk 36
Your views, from the price of games to the cost of violence

Mac Answers 87
Your Mac and Performa problems solved by our experts

Back Issues 98
Complete your collection of MACFORMATS while you can!

Special Offers 103
Top deals on some specially-selected top Mac goodies

Gamebusters 116
Lost in *Myst*? Routed in *Rebel Assault*? Help is at hand!

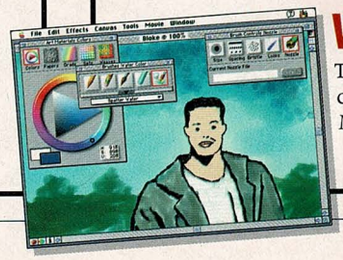
Buying Advice 120
Some pointers on how to protect your rights as a consumer

Free Reader Ads 122
Buy, sell and swap for free in MACFORMAT's reader ads

Can't Pay, Won't Pay! 124
Shareware authors get it wrong, says a MACFORMAT reader

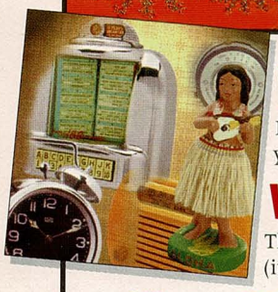
Dilbert 124
He's virtually real, and even better looking...

Next Month 129
Yes, you too can picture what the future will look like



Win! Win! Win! 130
This month you could win one of five copies of the state of the art in 'Natural Media ' paint programs, *Painter 3.0*!

REVIEWS



Painter 3.0 56
Brushes are boring and airbrush is out. Now you really can do it all on your Mac!

Word 6 62
The world's best-selling word processor ever (it's official!) gets upgraded. Who needs DTP?

Nisus Writer 66
Let's face it, earlier versions of *Nisus* didn't stand up too well next to the big guns of word processing. But now...?

Star Trek Technical Manual 72
It's the first CD-ROM title to make use of *QuickTime VR* (Virtual Reality, of course). So how does it shape up?

Oxford Reference Shelf 74
Put the 'multi' into 'multimedia' – with 16 reference books squished and squashed and shoe-horned on to a single CD

Macbeth 74
The full text of the Scottish play on CD, along with heaps of notes, *QuickTime* movie clips and much more

Headcandy 75
Oh wow. Unreal. It's a CD-ROM, it's got Brian Eno, and it's just indescribable...

Four Paws of Crab 76
This issue's puzzler: what *does* the title of this Thai cookbook on CD-ROM actually mean?

Making Great Pastries 76
And for afters, how about some cakes and pastries? It's another lip-smacking CD-ROM cookery book, of course

Education: ABC by CD-ROM 82
Helping kids learn to read doesn't just mean teaching 'em the alphabet – they need to learn that reading is fun. Can these new titles from Brøderbund and Omnimedia help?

Shareware Heaven 99
Turn your Mac into an intercom, track one-legged animals, create folders with names – in the wild world of shareware

Games Reviews
Games of every genre– an RPG, a shoot-'em-up, a classic god-game, even a paper dart sim...

PowerMonger 106
Eat my Photons 108
Inherit the Earth 110
Glider Pro 112
Fury of the Furries 114

Music 118
If your music's in a mess, you need a librarian – not the clichéd bespectacled cardigan-clad variety, but a program that can catalogue and organise your synthesised sounds

FEATURES

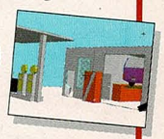
Explore strange new worlds... 43

Your Mac can transport you to far-away places, virtual landscapes and whole new interactive realities...

Winter Hiking & Australian Walkabout 44
Experience the Rocky Mountains or the Australian outback via CD-ROM – as real as being there, maybe

KPT Bryce 46
Keen on 'god-games'? This inexpensive program enables you to create new worlds of your very own!

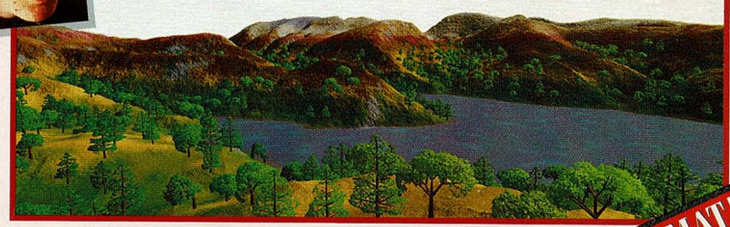
Vistapro: Shaping Our Future 49
How the landscape-generating program *Vistapro* is being used to enable people to visualise the future today



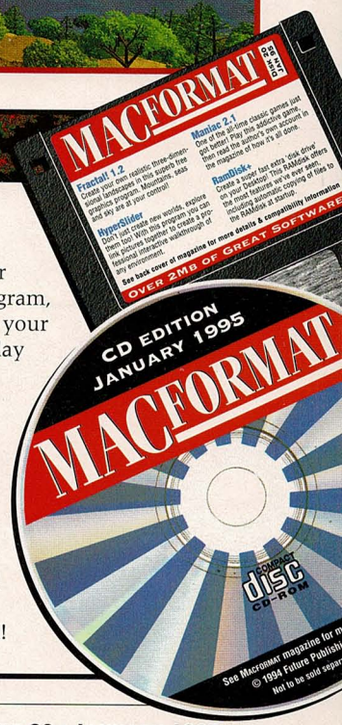
MacInteriors & Virtus WalkThrough 50
Creating whole worlds a bit daunting? How about 3D rooms? You can then even wander through 'em!

The Future – It's Almost Here! 52
Take the next step into virtual reality – don a headset, plug into your Mac, and start bumping into the walls!

Making Maniac 94
Ever wondered how Mac games really work? Play the complete, manic Pacman-style game on the cover disk, then find out from the author himself how it's all done!



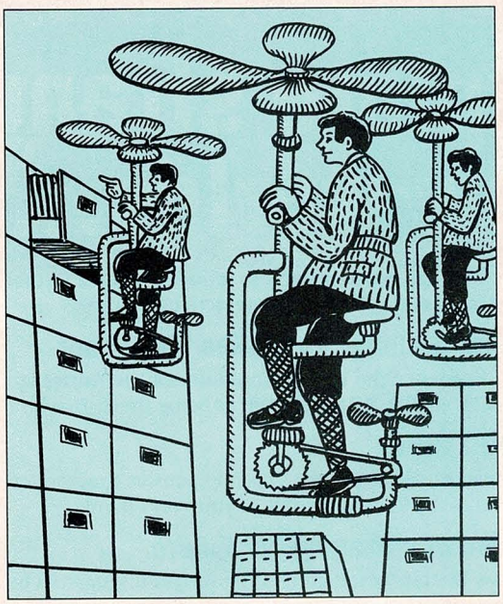
COVER DISKS



Your Cover Disk 7
Try your hand at world-making with our *complete* fractal landscape generating program, create an interactive walk-through, give your Mac a super-fast extra 'disk drive' and play our exclusive version of an old classic!

Your CD-ROM 9
If you have the CD-ROM edition of this issue, you have everything on the disk *plus* demos of software reviewed this month, including *Painter 3.0, KPT Bryce, Word 6, PowerMonger* and many more, all the shareware in this issue, and much more – over 600Mb and 7,500 files in all!

How do I sift through 5 years press cuttings in 5 minutes...?

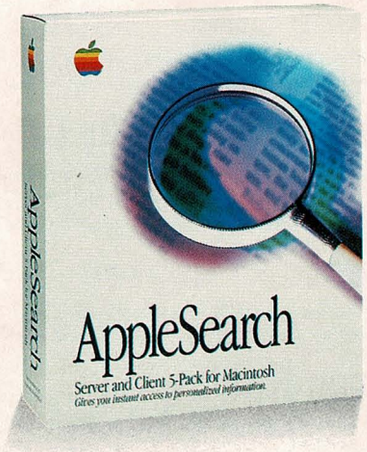


...Search me!

It's that vital client meeting in the morning. Your presentation must be spot on, informative and, above all, on time! Now where are those reports...?

You've been there before. The information you need could be in any files, including ones you have never seen. Anywhere on the network. Trying to find it quickly – and putting it together – can be your greatest nightmare.

That's why Apple™ are introducing their revolutionary **AppleSearch**™ software. **AppleSearch** takes the sweat out of information gathering, even across the largest networks, providing you with a true competitive advantage. It condenses all the knowledge and effort of the whole company into a single report. Intelligent network query handling will filter out any irrelevant data using advanced reporting. It even prioritises information to fit your brief.



And it's fast. By indexing all documents, **AppleSearch** conducts accurate, reliable searches that take seconds – not hours.

What's more, you don't need to be a computing genius to use **AppleSearch**. Search queries are made in English, not computer language. And it doesn't demand endless repetitive searches: a search on "car", can also pick up all references to "vehicle" and "automobile".

So next time you need those reports in a hurry...

AppleSearch

Call Freephone 0800 127753

(9am-6pm) for more information

Apple Computer

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Your cover disk

START HERE

A high density floppy disk can contain about 1.4 megabytes of software, but we want to bring you as much as possible every month. Therefore, we use compression programs to reduce the files in size so we can fit more on – this month there's well over three megabytes worth. Unfortunately, this means you can't use the programs straight off the disk. You must install them on your hard disk first.

Doing this is very simple. Just double-click on the floppy disk icon, then double-click on the MACFORMAT 20 icon. A copyright message appears. Click **Continue**. A box then appears that asks you where you want to save the contents of the disk. Choose the place on your hard disk where you want everything stored and click **Save**. After a couple of minutes or so of frantic disk activity, the files will be stored on your hard disk.

Before installing the cover disk we recommend that you back up any important work on your hard disk. This sensible precaution will avoid problems should any software not be compatible with your setup. We make every effort to check our disks for compatibility and viruses, but the information here is intended as a guide only, and MACFORMAT cannot be held responsible for any damage to data, any inability to use this software or any consequential losses. So please, for your own sake, back up first.

Raining outside? Reality getting you down? Don't despair! Switch on your Mac and let this month's cover disk whisk you away into virtual worlds.

This month's disk is so jam-packed with goodies that we had to dispense with custom folder icons just to get it to fit on to the floppy! Still, I'm sure you will agree that it was well worth the effort. Taking you through the disk this month are Clive Parker and Derek Smith...

HyperSlider

Slide show creator
Requires: System 7.1 or later

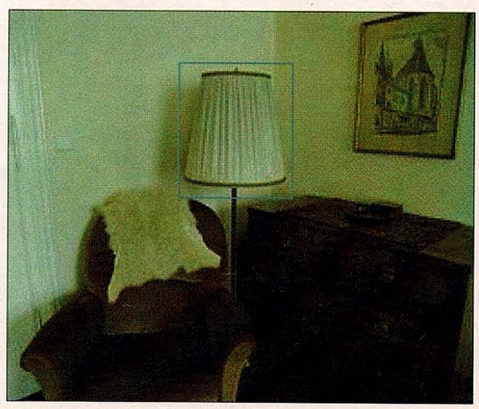
Have you ever wanted to escape into your own virtual world? Use *HyperSlider* and its simple point and click interface and you'll be able to create and present a slide show of virtual images to fire the imagination.

Through the use of clever hyper-links you can flip to another picture in the sequence by clicking on 'hot' areas of the image. All you have to do is move your mouse pointer around the image until it becomes 'active' – that is, changes shape. There's a demo slide show supplied and the disk gives you plenty of practice.

To create your own walk-through, select **New Slide Show** from the **File** menu and wait for the file selector box to appear. Now select the image you want – this will be the one to start off the sequence.

Now you have to create a 'hot spot' that will lead you on to the next screen when clicked on. Press **[Command]** and drag out a rectangle on the picture. When you release the mouse button a file selector dialogue appears; here you can select the picture linked to your 'hot spot'. It's now time to select the desired pointer shape and special effects.

Do this as often as you like: there's no limit to the number of links you can create, with each link going to a different image. It's all dead easy to use and you'll soon be wandering around your own home-made worlds. *GP*

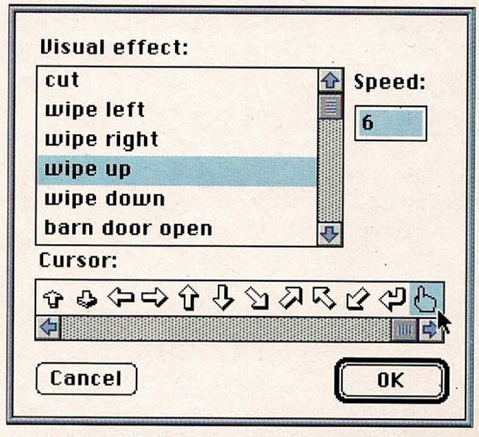


OK, here's the first picture, a chair and lamp in the corner of the room. Press **[Command]** and drag a rectangle around the area of image you want to use as a 'hot spot'.

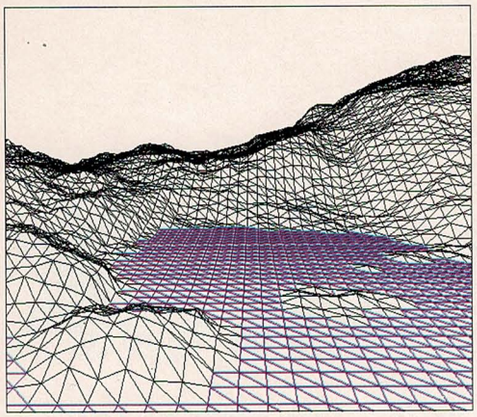
GETTING YOUR BACK UP

Before you do anything else, you should make a backup of the MACFORMAT cover disk and work only with the backup – just in case anything does happen to go wrong. Make sure the original cover disk is write-protected (move the tab so that you can see through the hole). Then nothing can be written to the disk. After that, follow these simple steps:

1. Insert the MACFORMAT cover disk.
2. Drag the disk's icon over your hard disk's icon. The contents of the cover disk will then be copied into a new folder on your hard disk called 'MACFORMAT 20'. It's still not decompressed, however, so at the moment you can't yet run anything directly.
3. When the copying finishes, drag the cover disk icon into the Wastebasket to eject it.
4. Insert a blank high density disk. Check that it's not write-protected and if need be format it, naming it 'MACFORMAT 20 backup' (or 'Fred' if you want. It doesn't matter).
5. Drag the 'MACFORMAT 20' folder from your hard disk on to the new floppy disk's icon. When it has finished copying, your backup is complete.
6. You can now delete the 'MACFORMAT 20' folder from your hard disk by dragging it across to the Wastebasket, and selecting **Empty Wastebasket** in the **Special** menu.

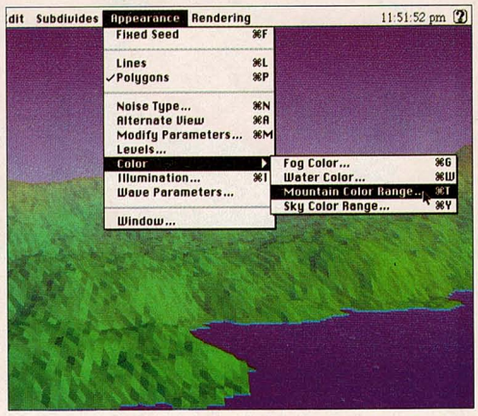


By pressing the **[Option]** key after you have selected your 'hot spot', you can define the shape of the pointer and select the special effect used to load the next image.



You can use *Fractal* to build up a contoured landscape image from a framework of interconnecting lines.

Alternatively, you can use polygons to create a more natural and rather less triangular-looking world.



You can change the look of a landscape rendered in *Fractal* by changing the colours in the various picture elements.

Fractal 1.2

Landscape Generator
Requires: Colour monitor, 2.5Mb free RAM

Until now the Capability Browns among you may well have been frustrated; creating landscapes required acres of manor house grounds, millions of pounds and many, many years of work. But not with *Fractal 1.2*.

'Fractals' are actually the building blocks of nature (believe it or not). A fairly simple mathematical equation enables your Mac to build complex shapes using just a few easily adjusted parameters, called seeds.

Using *Fractal* you can generate rendered landscapes with as little or as much detail as you like. If you want less detail then set the number of iterations to a low value, say between 1 and 5. This generates a landscape with a distinctly 'blocky' look to the polygons. Increase the number of iterations and the resulting image becomes increasingly smoother.

Of course, the more iterations you use to create your scene, the more memory you need and the longer it takes to render. If you're impatient and want to generate your images in, say, ten minutes or so, then keep the number of iterations to five or less.

By keeping the same basic seed parameters you can create a rough sketch of a scene using a low number of iterations. Once you are satisfied with the basic look of your scene, you can increase the number of iterations and create a smoother looking version. It's all very easy and you don't have to be a mathematician to create brilliant images. *GP*

Maniac Lite 2.1.1

Arcade Game
Requires: LC or better, System 7.0 or later, 256 colour 14-inch monitor, 1.9Mb free RAM

The arcade game we all abandoned 'Space Invaders' for in days of yore has been given the full treatment. Yup, the classic Pacman has been brought bang up to date in this superb adaptation by Alex Metcalf. Find out about his hows, whys and wherefores on page 94.

Playing the game is easy-peasy; simply double-click its icon, and when the intro screen appears, press **[H]** to get background help and instructions. Then press **[P]** to see the control keys for the game. Now it's full steam ahead – press **[N]** to kick it into life. Oh, and watch out for the ghosts! *DS*

This is a truly excellent game, so if you like it, support British shareware and send off your £10 to Alex Metcalf.

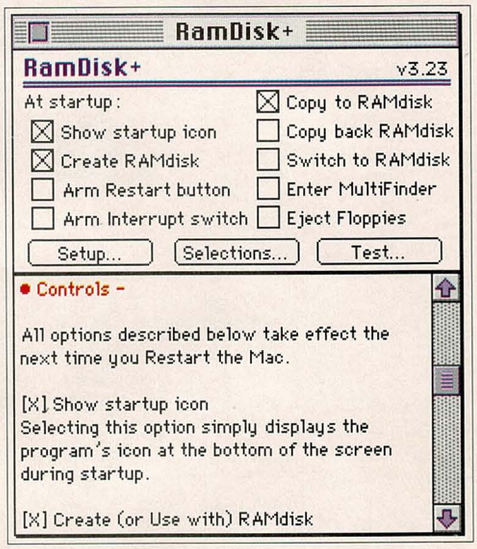
RamDisk+ 3.23

Utility
Requires: Any Mac and absolutely no sheep

Even after you buy a really fast Mac, disk access times are barely any faster than they are on a Classic. Irritating, isn't it? Well this utility puts some real drive into your disk drive.

It will create a super-fast, friendly-making disk on your Desktop that consists entirely of RAM. What this means is that you can allocate some of your Mac's internal RAM to be used as a disk, so it's no longer all squandered on programs (as it often is).

All you need is a little spare RAM to try this utility out. Drag its icon on to your System Folder and restart. Now open the Control Panels folder and double-click *RamDisk+*. Read the help in the bottom half of the screen, then click on **Create RAMdisk**. You now need to restart your Mac to gain this extra disk drive. *DS*



This is the best RAM disk program we have come across. It features a wealth of useful options.

GOT A PROBLEM?

If the covermounted high density disk or CD-ROM you have is defective, return it to us and we will replace it. Please make sure you have followed the installation procedures described in these pages correctly, to ensure that there is a physical problem with the disk itself. Otherwise, the replacement will be just the same!

Return HD disks to:
Discopy Labs
PO Box 21
Daventry
NN11 5BU

Return CD-ROMs to:
MACFORMAT CD returns
Future Publishing
FREEPOST (BS4900)
Somerton
Somerset
TA11 6BR

Enclose a self-addressed padded envelope (but we'll pay return postage) with the disk or CD, and a description of the fault. Please do not return disks or CDs to the editorial office; we don't hold stocks of them and can only refer you to the addresses above.

Your CD-ROM

This month's CD is chock-full of exotica: tastes of Thailand, colourful images from *Painter 3.0*, plus games and utilities too numerous to mention.

When the idea of putting a CD on the front cover was proposed, we thought we might have trouble filling that vast space every month. Not so. In fact, this month we could have filled it twice over, and we've had to select the best. I'm sure you'll agree that it's great value. Leading you on the merry dance this month are Brian Larkman, Richard Longhurst and, of course, Derek Smith...

Painter 3.0

Graphics package
Requires: LCII or better, 6Mb free RAM, System 6.0.7 or later. (PowerMac native)

Your chance to become the Van Gogh or Dalí of Macintoshes. Open up *Painter* and you'll get access to a wealth of artistic techniques that have been strangers to the Mac, until now.

But first, open the *Painter* folder and you will see one icon. Double-click this and select where you want to install the demo. If you have a PowerMac, the native version will automatically be installed for you. You will now have the full version of the program except that **Save**, **Print, Copy** and **Export** are disabled.

Once installed, open *Painter* and put some paper on to your drawing board by selecting **New** from the **File** menu and typing in the dimensions of the page you require. On a standard 14-inch monitor, 400 x 400 is a the sort of size you should start with. (Square images are more manageable for beginners, as they leave more room for stacking the palettes.)

Now to get your hands on the tools themselves. They're fairly obvious, and a number of the tools on the palette will be familiar from other programs you may have used, but try the Brush icon first.

The Brushes palette uses essentially a grown-up version of *Dabbler's* drawers and drawer-fronts metaphor. It displays five brush icons on the Drawer Front. Just below the icons is a pop-up menu with a range of Variants of each brush. To select other brushes, click on the arrowhead just below the central icon and the drawer will open. Here all of the available tools are displayed, dimmed if already on the Front. Another pop-up menu shows them all by name if you aren't sure. A few like Cloner and Masking are rather complex, but most are obvious. Try them and find out.

Look out for the down-pointing black arrowhead that opens drawers. And it's worth exploring everything. Treat the interface like a good adventure game. Leave no button unpressed. The Library Buttons especially give access to lots of extra goodies. In time you will become familiar with all the palettes but many of the controls can be left alone; the defaults are more than enough to get on with.

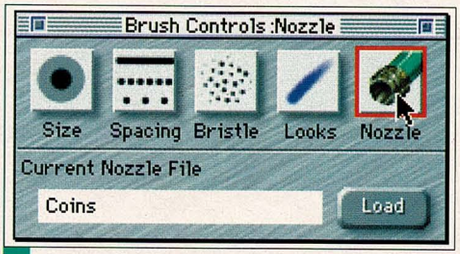
Try using the provided Sessions. Click on the Sessions button in the objects Palette. Running these with the VCR type controls will give you some idea of what can be done. While running a session, watch all of the buttons and palettes. Often you can see which tool was used to get a particular effect. If you have got back issues of MACFORMAT, check out the Natural Media tutorials in issues 14 to 19 for tips and information on how to get particular – and with luck spectacular – results.

Floaters are to be found on the Objects Palette. Click the Floaters button, then you can just drag-and-drop any of the thumbnails you see on to the page. Notice the Controls palette. What it displays varies for each tool and other palette you select. For instance it enables you to control opacity and feathering of Floaters. The palettes can be hidden with **[Command] [H]**, and full screen mode is **[Command] [M]**. That should be enough to get you started. *RL*

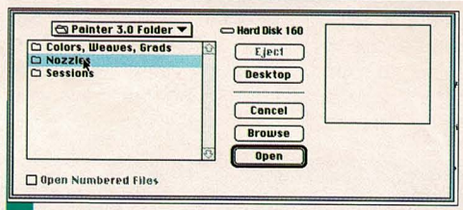
How to use the Image Hose

The Image Hose is one of the most exciting of the new features in *Painter 3.0*. Get a blank page by choosing New from the File menu, then follow these simple steps...

1 Click on the Image Hose icon (you may need to select **Brushes** from the **Window** menu).

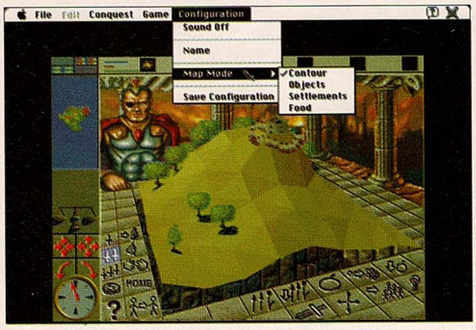


2 Click on the Nozzle icon (you may need to select **Brush Controls** from the **Window** menu).



3 Click on **Load** just below the Nozzle icon. Locate the Nozzle folder inside the *Painter 3.0* folder and open it. Double-click one of the six different nozzles.

4 Press and hold down the mouse button to spray images on to your paper. To change nozzles, click on Load again.



1 You're the colossus; the dots on the hill are your men.

2 Right, there's the settlement. Time to attack!

3 Your victory's complete! Pity it's raining...

PowerMonger

Strategy game
Requires LCII or better, 2.4Mb free RAM, System 7.0 or later

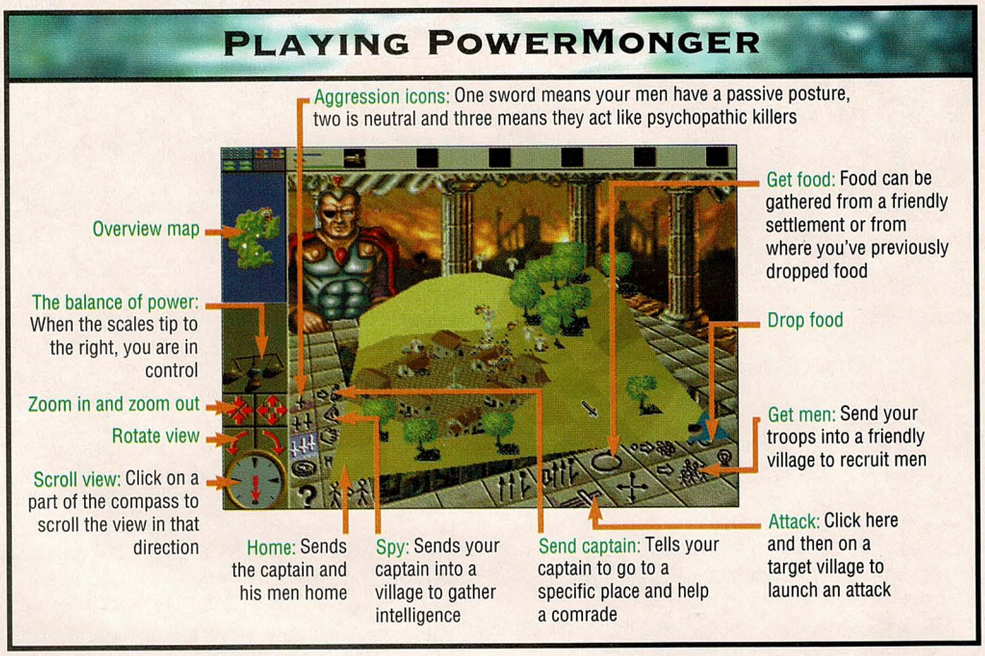
PowerMonger is a game of conquest, fighting, strategy and death. You play a general who's in the pay of a powerful warlord, and your boss wants you to get him more land. And then some. The full game challenges you to conquer 195 islands – an archipelago, no less – but our fully-playable cut-down demo gives you three islands to tackle. The first one's a piece of cake, and gives you a chance to get to grips with the control system, but from then on you're on your own. You have been warned.

1 Copy the demo to your hard disk and double click on the Demo icon to start the game.

2 Select **Start new conquest** from the **Conquest** menu. In the full game you can choose to play a randomly selected island, but that option is disabled in the demo.

3 You now see a map screen, with three green islands in the top left-hand corner. Select the island in the very corner of the screen – this is where your conquest starts. You can choose one of the other two icons once you have won the first island.

PLAYING POWERMONGER

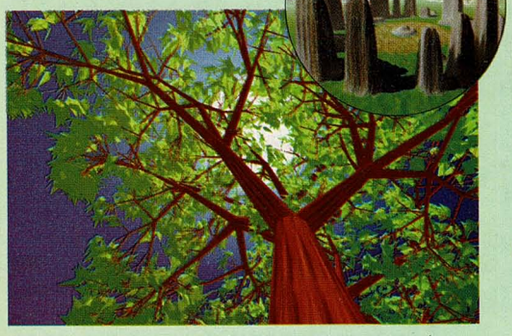

Aggression icons: One sword means your men have a passive posture, two is neutral and three means they act like psychopathic killers
Overview map
The balance of power: When the scales tip to the right, you are in control
Zoom in and zoom out
Rotate view
Scroll view: Click on a part of the compass to scroll the view in that direction
Get food: Food can be gathered from a friendly settlement or from where you've previously dropped food
Drop food
Get men: Send your troops into a friendly village to recruit men
Attack: Click here and then on a target village to launch an attack
Home: Sends the captain and his men home
Spy: Sends your captain into a village to gather intelligence
Send captain: Tells your captain to go to a specific place and help a comrade

4 You now see the playing area, with your men huddled on the top of a hill. The first island is easy to conquer, but first you need to see where the enemy settlements are, so select **Settlements** from the **Map Mode** option in the **Configuration** menu. (See picture 1 above.)

5 Two white dots appear on the overview map in the top-left corner of the viewing window. Click on the lower dot and the view zooms in on the settlement. Select the attack icon and then move the pointer over the village. A red line will appear on the overview map and a fast drum-beat will sound. Click on a building to start the attack. (See picture 2.)

TOO MANY TO MENTION...

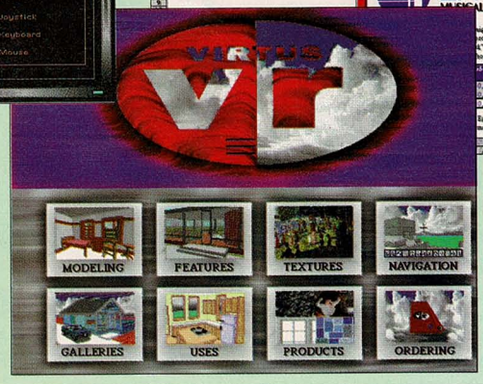
This CD is so ridiculously stuffed to the gills with great software that we can't possibly cover it all in these pages, so here are some of the other highlights to watch out for...

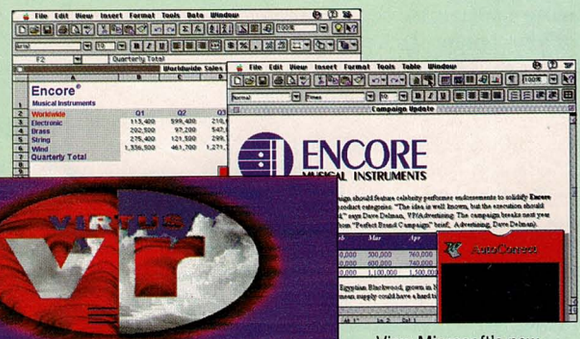


See for yourself the beauty of *Vistapro* with some sample images from the CD, along with one of its animations.

Experience some unadulterated blasting with the demo of the excellently named *Eat My Photons*.

Experience the cutting edge of virtual reality with *Virtus*. So realistic that when I went to examine one of the houses, someone had broken in and nicked the telly.





View Microsoft's new version of *Word* and *Excel* with these two rolling demos. They are very well put together but why doesn't Microsoft produce working demos?

CURRIED CATFISH
W/GINGER
PHAT PHET PLA DUK TOD GROB
INGREDIENTS:
1 WHOLE CATFISH (2 LB)
2 CUPS VEGETABLE OIL
2 TBS. GARLIC, CHOPPED
1 TBS. RED CURRY PASTE
1 TSP. SUGAR
1 TBS. FISH SAUCE
1 TSP. OYSTER SAUCE
5 THAI EGGPLANTS, QUARTERED
(1/2 CUP AMERICAN OR
JAPANESE EGGPLANT, CUBED)
1/2 CUP FRESH GINGER, JULIENNED
1 TSP. WHITE PEPPERCORNS
1/2 CUP FRESH BASIL
THERE IS A VERY GOOD REASON WHY THAI KITCHENS ARE OUTSIDE; FRYING CURRY PASTE STINKS UP THE HOUSE. NO JOKE.
STOP
THAILAND 1860
As Siam struggles to accommodate Western economies and simultaneously protect their own, the country undergoes a complete economic restructuring, leaving it in a state of transition for many years. The image that Siam projects to the West is an important factor in King Mongkut's re-configuring of Siam. It is important to him that the Siamese are treated as equals by the Westerners. First, the traditional cultural structures that stratify Siamese society have to be abolished in order to integrate the market system. The sakdinaa system, an ancient infrastructure which allotted wealth and status in Siamese communities, is abolished, and so is slavery. A new economic base is created and, for the first time, a business community develops.
NEXT
LAST

Put on your apron and cook up something exotic on your Mac with two lovely programs. Plug your Mac in in the kitchen and read the reviews on page 76.

6 Your men will swarm across the countryside and butcher the villagers. When the battle is over, they'll go and have a sit down and a gossip in the trees near the village. You'll notice that the scales that show the balance of power have swung in your favour.

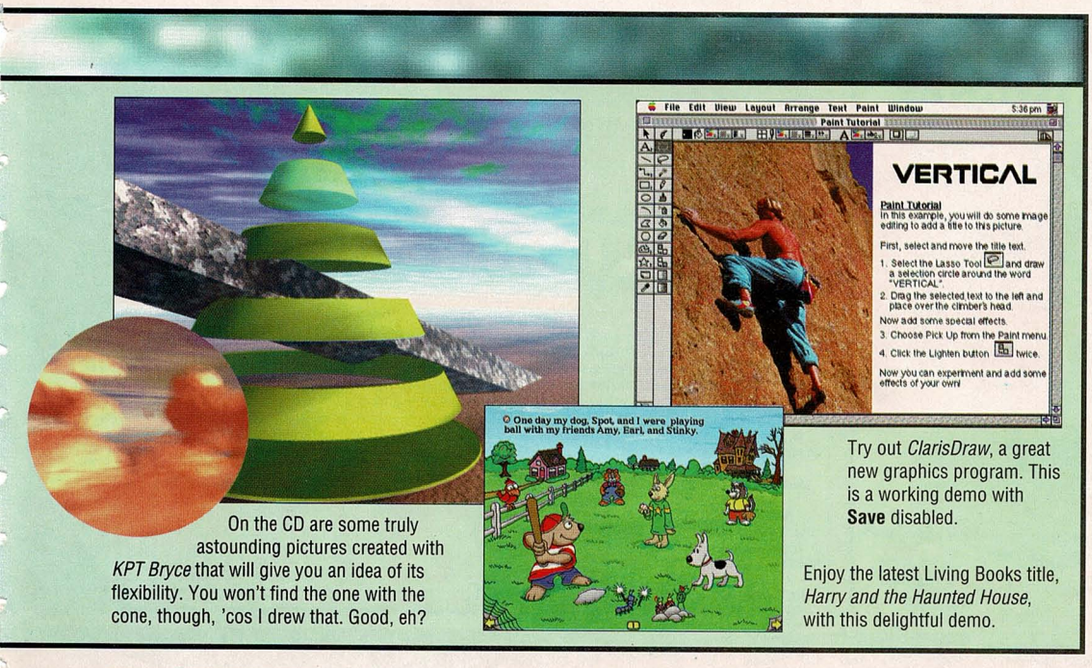
7 Attack and conquer the other settlement and you'll find yourself in control of more than two thirds of the population. Select **Retire** from the **Game** menu and your victory's complete. Stop pounding the table, captain.(See picture 3.)

8 Select **Continue Conquest** from the **Conquest** menu and you can select a second island to tackle, but this time, it's up to you what to do. Experiment with the different icons to find out what they're best for. *RL*

Arome/Four Paws of Crab

Cookery programs
Requires: LCII or better, System 7, 1Mb free RAM, Colour monitor

Also on the menu are two delicious demos of cookery programs for you. *Four Paws* is an interactive taster of the CD which is all about Thailand and its food. There is a full review on page 76. The Arome folder contains a rolling demo of two titles, *Making Great Pastries* and *Gourmet French Cuisine*. To improve speed, you can copy *Four Paws* to your hard disk, but Arome is probably too large, unless you have a hard disk the size of David Mellor's ego. *DS*


File Edit View Layout Arrange Text Paint Window 5:36 pm
Paint Tutorial
VERTICAL
Paint Tutorial
In this example, you will do some image editing to add a title to this picture.
First, select and move the title text.
1. Select the Lasso Tool and draw a selection circle around the word "VERTICAL".
2. Drag the selected text to the left and place over the climber's head.
Now add some special effects.
3. Choose Pick Up from the Paint menu.
4. Click the Lighten button twice.
Now you can experiment and add some effects of your own!
One day my dog, Spot, and I were playing ball with my friends Amy, Earl, and Stinky.

On the CD are some truly astounding pictures created with *KPT Bryce* that will give you an idea of its flexibility. You won't find the one with the cone, though, 'cos I drew that. Good, eh?

Try out *ClarisDraw*, a great new graphics program. This is a working demo with **Save** disabled.

Enjoy the latest Living Books title, *Harry and the Haunted House*, with this delightful demo.

Rolf Howarth has sent in a slideshow stack along with some very attractive pictures, including this idyllic scene.

Reader's Corner

Your programs
Requires: see individual ReadMe files

The highlight this month is surely a collection of Australian folks songs from down under by Mark Gregory. The *HyperCard* stack contains the words so you can sing along, but sadly lacks any explanation of why Australians like to tie their kangaroos down. Hmm. Also, there's the complete text from 'Around the World in 80 Days' for Olivier Tableau; mind you, it's all in French.

There are more *HyperCard* contributions from Peter Hastings and Matthew Jones, who sends us a horror stack that's even more scary than XCMDs. There's a magazine on disk from Adam Sculthorp, plus a rather good card game from Christian Riley. It's not a lot of use for playing a game of strip cards, though, as it's a patience version. (Unless of course you're really, really lonely, and rather sad.)

If you have any software that you have written and would like to expose to the world then send it along to Derek Smith at the usual address. If you have something you would like to say, then exercise your right to free speech, send it along in *TeachText* format and we will publish it. (If it's not too rude.) *DS*

Confluence

Vistapro files
Requires: Colour monitor, QuickTime (supplied on the CD)

Confluence is a company which produces a range of British landscapes for use with *Vistapro*. On the CD you will find two *QuickTime* movies flying across two of those landscapes, produced with *Vistapro CD* using the new *MakePath* program. Also in the folder, you will find an item called 'Nevis', which contains a sample of the landscapes available from Confluence. You get many such landscapes in each set. See page 49 for full details. *DS*

Fly across our great nation in Superman mode with these two *QuickTime* movies produced with the *Vistapro CD*.

Authorised Education Reseller
Authorised Apple Workgroup Server Reseller
Certified Digital Audio Editing Systems Specialists

"It's Christmas time and I'm having a ball. - Especially at these prices!"

This is... computer warehouse

Computer Warehouse is a division of TSC Ltd.

Authorised Reseller

The Nation's Festive Warehouse!

WHY CW WON'T SHOP ANYWHERE ELSE FOR HIS MACINTOSH, SOFTWARE & MULTIMEDIA

LARGEST STOCKS
"The best stocks of the latest Macintosh computers & peripherals in the U.K.
Plus: Special end of line clearance offers!"

BEST BACK-UP
"Apple trained engineers on-site offering me the best back-up in the business. I just wouldn't trust my trusty Mac to anyone else."

LOWEST PRICES
"They buy BIG BIG BIG and pass savings they make on to their customers".

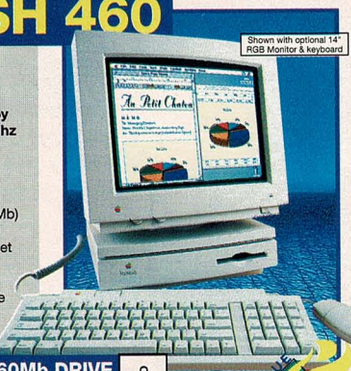
APPLE AUTHORISED
"They're bona fide Apple Authorised Resellers - Beware those who aren't!"

MACINTOSH 460

THE LOW-COST HIGH VALUE MAC!

The superb Macintosh 460 features a zippy Motorola 68030 processor running at 33Mhz which makes it the machine of choice for general business, education and home entertainment tasks.

- 33Mhz 68030 - fast as a Macintosh IIvx!
- 4Mb of on-board RAM (expandable to 36Mb)
- 160Mb internal hard drive fitted
- LC expansion slot (for accelerators, Ethernet etc)
- Colour monitor support to 16"
- Complete with System 7 • Desktop mouse
- **Your low-cost entry into Mac computing!**



Shown with optional 14" RGB Monitor & keyboard

BEST VALUE

MACINTOSH 460 4Mb RAM 160Mb DRIVE

LIMITED CW WINTER SAVER **£499**

EX.VAT. DOES NOT INCLUDE KEYBOARD OR MONITOR

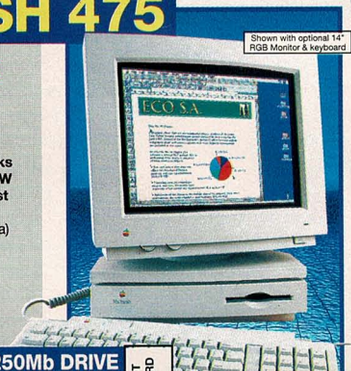
£586 inc VAT

MACINTOSH 475

THE BEST SPEED/PRICE VALUE OF ALL!!

The entry level 68040 Mac & a real speed demon! Runs at a Quadra 700 matching 25Mhz and is ready to rip through CW's business, office dtp and edutainment tasks with gusto. In this strictly Limited Offer CW can offer this superb machine at near cost price!!

- 25Mhz 68040 processor (as fast as Quadra)
- 4Mb RAM (exp 36Mb) • 250Mb hard drive
- SCSI port for adding CD-ROM etc • LC expansion slot • Colour support to 21"
- Complete with desktop mouse & System 7 operating software
- **LIMITED STOCKS AT THIS PRICE!!**



Shown with optional 14" RGB Monitor & keyboard

MACINTOSH 475 4Mb RAM 250Mb DRIVE

LIMITED CW WINTER SAVER **£599**

EX.VAT. DOES NOT INCLUDE KEYBOARD OR MONITOR

£704 inc VAT

EXCELLENT CW VALUE
MACINTOSH 475 4/160 KEYBOARD
14" PERFORMA PLUS DISP.
CLARIS WORKS
£799.00

TOP GRADE MONITORS

MULTIPLE SCAN 15"

- 15" Multiscan
- 3 resolutions
- Built-in stereo speakers & headphone jack
- Energy Star compliant

NEW! PRODUCT

15" MULTI SCAN FROM APPLE
£299
£351 inc VAT

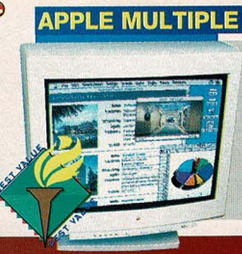
MULTIPLE SCAN 17"

- 17" Multiscan
- Trinitron
- Adjust. resolutions
- Zoom features with A3 capability
- Energy Star compliant

CW RECOMMENDED

17" MULTI SCAN FROM APPLE
£699
£821 inc VAT

APPLE MULTIPLE SCAN 20"



BEST VALUE

Here's an incredible deal - and a 'wrap up warm' special from The Warehouse. The Apple 20" Multiple Scan monitor is based around a superb Sony Trinitron screen and offers superb features

- 20" Multiscan
- 0.28mm dot pitch
- Ideal for DTP work
- Adjustable resolution to 1,152 x 870 pixels
- Trinitron
- Energy Star compliant
- Ideal for CAD work

20" MULTI SCAN FROM APPLE
£1299

MACINTOSH 630

Shown with optional 14" RGB Monitor & CD-ROM

NEW! PRODUCT

CW RECOMMENDED

CW PRODUCT CHECKLIST

- ☐ 66/33Mhz 68LC040
- ☐ 3 Expansion ports
- ☐ Optional TV tuner
- ☐ Upgrade to Power PC
- ☐ LC PDS Expansion
- ☐ Optional CD-ROM
- ☐ Support to 15" Mon.
- ☐ Infra-Red rem. control

MACINTOSH 630 8/250 + KEYBOARD

LIMITED STOCKS ONLY **£799**

EX.VAT. DOES NOT INCLUDE CD-ROM OR MONITOR

£938 inc VAT

TOP VALUE AT CW!

The most advanced CD-ROM equipped multimedia Mac. Connect to an external video source such as VCR or camcorder to cut and paste video images. Add an option to connect your computer to a large-screen TV for displaying presentations. Add an internal NICAM stereo TV tuner to view television channels in a floating window on the screen. (Yes Television and Excel on the same screen at the same time!) All this + 16-bit sound, built-in networking plus loads of expansion. CW just loves it!

- 66/33Mhz 68LC040 processor - the clock speed of a Macintosh Quadra 800!
- 8Mb RAM (Expandable to 36Mb) ■ 250Mb Hard Drive ■ Optional CD-ROM
- 3 expansion slots ■ Support for 1,000s of colours (16-bit) on 14" display
- Optional TV Tuner (Allows full screen TV or TV in window operation)
- Video support for 15" monitors (Check out the new 15" multiscan with stereo speakers - it's ideal for multimedia!)
- Optional infra-red control of CD-ROM drive & NICAM stereo TV tuner (If fitted)
- Dual Hard Drive I/O (IDE, external SCSI)
- **CW's price includes keyboard!**

CHOOSE YOUR CONFIGURATION

LC 630 8/250 14" Performa Plus Display & Keyboard..**£999**
Perf. 630 8/250CD + Claris Works 2.1 & keyboard..**£899**
Perf 630 8/250CD 14" PP Display & Keyboard...**£1099**

MACINTOSH 630 Plus!

OVER £600 OF SOFTWARE FREE WITH MULTIMEDIA BUNDLE

CLARIS WORKS VERSION 2.1
MAVIS BEACON TEACHES TYPING
CLICKART PERFORMA
MacGALLERY TREASURY PACK
SPECTRE SUPREME
GROLIER ENCYCLOPEDIA
1994 GUINESS BOOK OF RECORDS
ZOO & ANIMALS, DINOSAURS
ROSETTA STONE LANGUAGE PACK
LIFE OF LEONARDO
THE TALE OF BENJAMIN BUNNY
AVID VIDEO SHOP MOVIE EDITOR

THE CD + TV MACINTOSH!

Everything you need for top flight multimedia is included in this super-autumn saver from CW. And CW says everything he means it. Powerful Macintosh, CD-ROM player, TV Tuner. AND also included in the package is over £600 of great software titles - FREE!!! (Monitor & Keyboard extra)

- Powerful Macintosh system complete with 8Mb of RAM and 350Mb Hard Drive
- Built-in CD-ROM drive - Plays CD-ROM titles, Audio CD's & PhotoCD
- NICAM stereo TV tuner & infra-red remote Full screen TV or in window

MAC 630 8Mb RAM 350Mb DRIVE CD+TV

AND GET FREE CLARIS WORKS **£1149**

EX.VAT. INCLUDES CD, TV TUNER NO KEYB OR MONITOR

£1350 inc VAT

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No 9 HATTON STREET. LONDON NW8 8PR FAX: 071 724 3775

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CW'S PRICING POLICY
All prices quoted are exclusive of VAT @17.5% and correct at time of press (E&OE). Computer Warehouse reserve the right to change specifications and prices at any time.

Merry Christmas

"The Warehouse would like to wish all their customers a very Merry Christmas and a Prosperous 1995"

This is... computer warehouse

FAX 071 724 3775 or 081 963 0624 FOR A QUICK QUOTE

Computer Warehouse is a division of TSC Ltd

Authorised Reseller

"I find Christmas shopping easy at the store my Mum recommends. - Festive CW!"

POWER MACINTOSH 6100/60

OFFER LIMITED 1ST COME 1ST SERVED

Pictured with optional 16" monitor & keyboard

UNBEATABLE CW VALUE!

If you want to run complex graphics, dtp, word processing, database or spreadsheet applications at breakneck speed then look no further than this stunning Special Deal from CW's handy Warehouse.

- 60Mhz Motorola PowerPC601 RISC processor
- Math co-processor built-in
- Ethernet
- 8Mb RAM on board, expandable to 72Mb
- 250Mb Hard drive fitted
- NuBus/PDS expansion slot
- 5.25" bay for CD-ROM drive
- Built-in color support to 21"
- High-speed SCSI bus for faster data transfer
- Stereo sound input and output ports

P/MAC 6100/60 8Mb RAM 250Mb DRIVE

WITH CW YOU SAVE £££££'s

£1099

£1291 inc VAT

EX.VAT. DOES NOT INCLUDE KEYBOARD OR MONITOR

POWER MACINTOSH 7100/66

Pictured with optional 14" monitor & keyboard

OFFER LIMITED 1ST COME 1ST SERVED

CHOOSE YOUR CONFIGURATION

7100/66 8/350 CPU only	£1599
7100/66 8/500 CD	£1849
7100/66 8/500 CD AV	£1999

ALL ABOVE PRICES EXCLUDE VAT

The Power Macintosh 7100/66 is Apple's mid-range Power Mac and offers increased RAM capacity, NuBus expansion and dual monitor support over the 6100/60. In addition it features a 66Mhz version of the RISC PowerPC 601 chip with 32K on-chip cache. CW ideal for publishers and people who need the benefit of NuBus slots..

- 66Mhz PowerPC 601 with 32k on-chip cache
- 3 NuBus expansion slots for adding video cards etc
- Internal 5.25" bay for optional CD
- Dual monitor support (1Mb of on-board VRAM)
- 8Mb RAM, expandable to 136Mb
- Built-in High speed Ethernet
- Enhanced SCSI for faster data transfer

P/MAC 7100/66 8Mb RAM 350Mb DRIVE

7100/66 FROM ONLY **£1599**

£1879 inc VAT

CPU ONLY. PRICE EXCLUDES MONITOR AND KEYBOARD

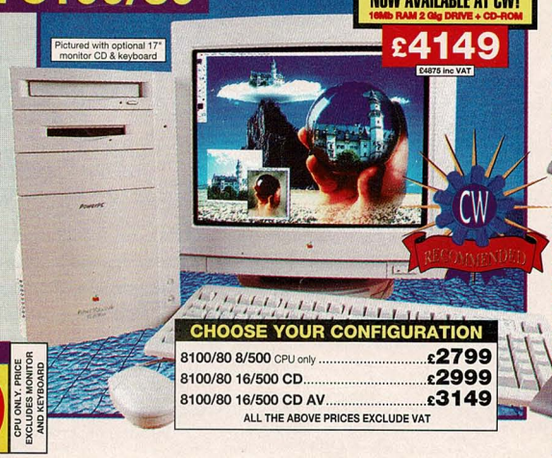
POWER MACINTOSH 8100/80

110Mhz 8100 NOW AVAILABLE AT CW!

16Mb RAM 2 Gig DRIVE + CD-ROM

£4149

£4875 inc VAT



Pictured with optional 17" monitor CD & keyboard

Apple's most powerful desktop computer and a CW 'Best Buy' for all those users who need maximum power and productivity from their Macintosh.The superb 8100 features an 80Mhz Power PC 601 processor with 32K on-chip cache and 256K memory cache to make mincemeat out of the most demanding applications. Expansion is awe-inspiring with 3 NuBus slots, 5 internal storage bays and capacity to use up to 264Mb of RAM.

- 80Mhz 601 with 32K on-chip cache
- 256K memory cache (makes all the difference!!)
- 3 NuBus slots for plenty of expansion
- Ethernet
- Internal 5.25" bay for optional CD (total 5 bays)
- Dual monitor support
- 8Mb RAM, exp to 136Mb
- Enhanced SCSI for faster data transfer

P/MAC 8100/80 8Mb RAM 250Mb DRIVE

8100/80 FROM ONLY **£2499**

£2936 inc VAT

CPU ONLY. PRICE EXCLUDES MONITOR AND KEYBOARD

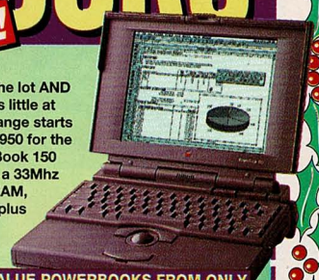
CHOOSE YOUR CONFIGURATION

8100/80 8/500 CPU only	£2799
8100/80 16/500 CD	£2999
8100/80 16/500 CD AV	£3149

ALL THE ABOVE PRICES EXCLUDE VAT

POWER BOOKS

SAVE!!



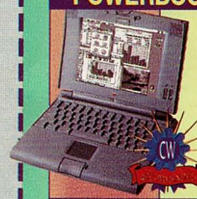
CW has got the lot AND cases from as little at £19.95! The range starts at less than £950 for the great PowerBook 150 with features a 33Mhz 68030, 4Mb RAM, 120Mb Drive plus FREE Claris Works 2.1

TOP CW VALUE POWERBOOKS FROM ONLY

150 4/120 + CLARIS WORKS **£939**

EX VAT £1103 inc VAT

POWERBOOK 520



- 25/50Mhz '040
- Ethernet
- Trackpad
- Greyscale display
- 4Mb RAM - exp to 36Mb
- 160Mb drive
- Direct color out to 16"

POWERBOOK 520 4mb RAM 160Mb H. DRIVE **£1499**

£1761 inc VAT

POWERBOOK 520C

- 25/50Mhz '040
- Ethernet
- New Trackpad
- Dual Scan 256 color display
- Direct color out to 16"
- PDS slot

POWERBOOK 520C 4mb RAM 160Mb H. DRIVE **£1939**

£2278 inc VAT

POWERBOOK 540

- 33/66Mhz '040
- Ethernet
- NEW Trackpad
- Top greyscale display
- 4Mb RAM
- 240Mb drive
- Direct color out to 16"

POWERBOOK 540 4mb RAM 240Mb H. DRIVE **£2129**

£2502 inc VAT

POWERBOOK 540C

- 33/66Mhz '040
- Ethernet
- New Trackpad control
- Active Matrix color display
- 4Mb RAM
- 320Mb drive
- Direct color out to 16"
- PDS slot
- CW BEST BUY!

POWERBOOK 540C 4mb RAM 320Mb H. DRIVE **£3199**

£3759 inc VAT

The Nation's Festive Warehouse!

LOWEST UK PRICES!
CW buys BIG so you get the very best deals available in the UK. You just can't buy better than CW!

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"Xmas gift ideas galore - all at CW's favourite store!"

Authorised Education Reseller
Authorised Apple Workgroup Server Reseller
Certified Digital Audio Editing Systems Specialists

Computer Warehouse is a division of TSC Ltd.

Authorised Reseller

The Nation's Festive Warehouse!

BARGAIN SOFTWARE!!

- Over 2000 editable EPS images + FREE fonts
- Place directly in DTP
- Or edit using Freehand or Illustrator

T-MAKER CLIP ART
2000 IMAGES + FONTS
£49

- V.fast and easy to use word processor
- Ideal for PowerBooks - uses v.little memory
- Imports from major WP and DTP applications

WRITE NOW v4
WORD PROCESSOR
£29

SAVE

SAVE!!

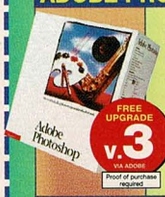
QUARK XPRESS 3.3 MACINTOSH & NATIVE

Accelerated for Power Macintosh

QUARK XPRESS v3.3 MACINTOSH
LIMITED SUPER SAVER **£549** EX VAT £645 inc VAT

QUARK XPRESS v3.3 POWER MACINTOSH
NOW FOR POWER MAC! **£649** EX VAT £763 inc VAT

ADOBE PHOTOSHOP



2.51 + FREE v3 UPGRADE
Version 3 now includes:
- Layers for easier montaging
- New Lighting Effects
- Sponge tool for saturation control

FREE UPGRADE v.3 VIA ADOBE. Proof of purchase required

PHOTOSHOP v2.51 + FREE UPGRADE **£399** £469 inc VAT

THE BEST DATABASE

Best value relational database
- 10 simultaneous related files
- Automatic data entry/check
- Easy to use macros
- FREE 10 ready to use databases

4D FIRST NATIVE FOR POWER MAC **£99** £117 inc VAT

WORD PERFECT + FILEMAKER

2 great packages for £200!!
- Word Perfect - powerful word processing
- Filemaker Pro - best selling database
- Limited Offer, Call CW NOW!!

INTEGRATION W. PERFECT + F.MAKER **£199** £234 inc VAT

ADOBE ILLUSTRATOR

The postscript drawing package of choice.
- Plug-in technology
- New trapping features
- Excellent text handling
- Superb Filters for special FX
- FREE 220 fonts and Adobe Acrobat

APPLE MACINTOSH 5.5 INCLUDES PPC VERSION

ILLUSTRATOR FOR MAC OR P.MAC **£279** £328 inc VAT

24Bit COLOR SCANNER!

FREE PHOTOSHOP LE + ON-SITE WARRANTY

CW RECOMMENDED

SCANMAKER II

How about a 300 dpi 24bit color scanner complete with Adobe Photoshop LE AND FREE 1 year On Site Warranty for less than £400!! With the Microtek Scanmaker II you can capture glorious 24-bit color images and 8-bit greyscale images. And it doesn't stop there. The Scanmaker II is also perfect for scanning line art - up to an enhanced 1200dpi resolution.

- 24-bit color scanning (16.7m colors)
- 8-bit color scanning (256 greys)
- 300 x 600dpi optical resolution
- Up to an enhanced 1200dpi line art
- Free Adobe Photoshop LE
- Free 1 year on-site warranty

With a Scanmaker II and Photoshop LE you're ready to use color, mono and line art in your publications from day 1

SCANMAKER II + PHOTOSHOP LE + ON-SITE
Minimum packing supplied.
£399 EX VAT £469 inc VAT

HUNDREDS OF GIFT IDEAS

AT CW £29.00 Ex vat
AT CW £Call
AT CW £29.00 Ex vat
MAC CD £69.00 Ex vat
AT CW £29.00 Ex vat
AT CW £29.00 Ex vat
MAC CD £35.00 Ex vat
AT CW £39.00 Ex vat
AT CW £29.00 Ex vat
AT CW £29.00 Ex vat
PRINCE OF PERSIA 2
DINOSAURS
ENCARTA
CINEMANIA 94
PGA TOUR GOLF II

At the festive Warehouse you'll find all manner of Macintosh gift ideas. Call in today!

- ★ Games
- ★ CD-ROMs
- ★ Music Software
- ★ Joysticks
- ★ Multimedia
- ★ Mice holders
- ★ Mouse Mats

COMPLETE THIS FORM AND MAIL TO RECEIVE YOUR FREE CATALOGUE!!

Please rush me the UK's Best Macintosh Mail Order Catalogue packed with Mac hardware & software ☐

Please keep me informed on all the latest Mac news & special CW deals ☐

LARGE FORMAT MICROLOGUE

Name

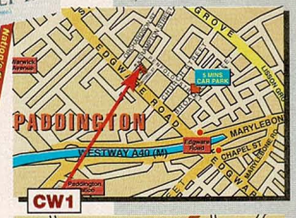
Address

Post Code

Tel No

Mac Format Jan 95

COMPLETE AND SEND TO COMPUTER WAREHOUSE
NO 9 HATTON STREET. LONDON NW8 8PR



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APPLE CD300e Plus

NEW! PRODUCT

The new Apple CD300 Plus is a 'caddy-less' mechanismed machine operating at a CW speedy double speed.

- Reads PhotoCD multi-session
- Fast operation - Double Speed
- Apple brand of quality
- Access to 1,000s of CD titles

APPLE CD-300e PLUS CD-ROM DRIVE

EXCELLENT APPLE CD! £199 EX VAT £234 inc VAT

This is... computer warehouse

FAX 071 724 3775 or 081 963 0624 FOR A QUICK QUOTE

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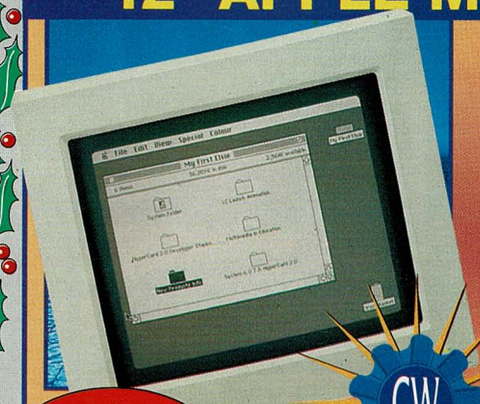
Authorised Reseller

"I fill my stocking where the prices are shocking"

12" APPLE MONO MONITOR



Fancy adding a 2nd monitor to your system? Buying an Apple Macintosh just for Word Processing? Or maybe you've got a redundant Mac lying around after an upgrade? If so then consider this genuine Apple 12" high-resolution display.

- 12" High-resolution Apple screen
- Superb for all text and grayscale use
- Can display 256 greys (depending on card or VRAM installed in Macintosh) • Ideal for WP & all non color works • **HURRY!! This is a very limited offer and CW only has a few at this price - Place your order on 071 724 4104 today!!**

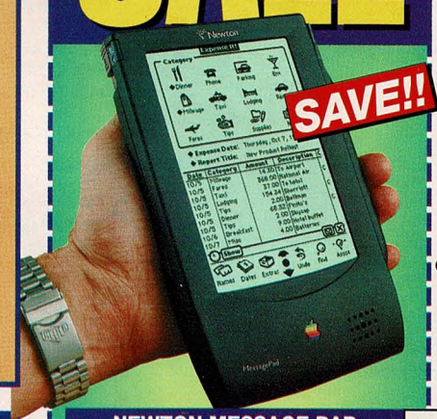
APPLE 12" HI-RES MONO MONITOR

LIMITED SUPER SAVER £49 EXCLUDING VAT £58 including VAT

OFFER LIMITED 1ST COME 1ST SERVED

CW RECOMMENDED

SALE



SAVE!!

NEWTON MESSAGE PAD

LIMITED OFFER WINTER SAVER £99 Ex VAT £117 inc VAT

EX WAREHOUSE STOCK. MAY HAVE DAMAGED PACKAGING

SAVE ££'s @ CW ON APPLE PRINTERS

STYLEWRITER II

INKJET FOR LESS THAN £200!!
Advanced inkjet technology delivers 'laser-like' printing at 360dpi and 2 pages per minute.

- 360dpi ink-jet engine
- Plain paper or envelopes
- 39 TrueType fonts

FREE FUN FONTS WITH THIS PRINTER WORTH £49!

STYLEWRITER II 360DPI PRINTER

PLUS FREE FUN FONTS £199 EX VAT £234 inc VAT

COLOR STYLEWRITER PRO

360DPI COLOR PRINTER
CMYK A4 color printer.

- ColorSync™ color-matching
- 4 ink cartridges - CMYK
- Tray for 100 sheets of paper
- A real performer - ideal for visuals, presentations and general color work.

FREE FUN FONTS WITH THIS PRINTER WORTH £49!

APPLE COLOR STYLEWRITER PRO

PLUS FREE FUN FONTS £399 EX VAT £468 inc VAT

LASERWRITER 300 PERSONAL

GENUINE APPLE LASER @ LESS THAN £400!
The Apple Personal LaserWriter 300 brings you laser quality printing for the price of an inkjet. Just check these features:

- 300dpi genuine laser quality
- 39 scalable TrueType fonts
- GrayShare software included
- 4ppm operation
- **FREE FUN FONTS**

FREE FUN FONTS WITH THIS PRINTER WORTH £49!

300DPI PERSONAL LASERWRITER 300

PLUS FREE FUN FONTS £399 EX VAT £469 inc VAT

LASERWRITER PRO 630

"Ideal for large workgroup networks"

Pictured with optional 250 sheet & envelope trays

Best value network printer!! 600dpi network laser with Postscript Level 2, PhotoGrade & FinePrint technologies.

- 600dpi laserprinter
- Postscript Level 2
- Ethernet
- Prints to Paper, envelopes, transparencies
- Add a 500 sheet feeder with tray & cassette, plus a 2nd universal cassette AND an envelope cassette for only £99!!

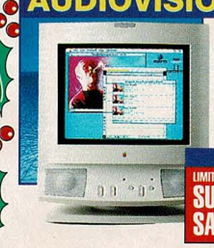
ENV. + SHEET FEEDER
PLUS UNIVERSAL CASSETTE
£99 £117 inc VAT

BEST VALUE

APPLE 600DPI LASERWRITER PRO 630

WINTER SUPER SAVER £1199 EX VAT £1409 inc VAT

AUDIOVISION 14"



TRINITRON + STEREO SPEAKERS
Excellent display and the ideal multimedia monitor!

- 14" Trinitron technology
- Built-in stereo speakers
- .28mm dot pitch
- Tilt & swivel base

APPLE AUDIOVISION 14" MONITOR

LIMITED SUPER SAVER £299 EX VAT £351 inc VAT

MULTIPLE SCAN 20"

Here's an incredible deal - and a 'wrap up warm' special from The Warehouse.

- 20" Multiscan • Trinitron technology
- 0.28mm dot pitch
- Energy Star compliant
- Ideal for DTP & CAD work

CW RECOMMENDED

APPLE MULTIPLE SCAN 20" DISPLAY

LIMITED SUPER SAVER £1299 EX VAT £468 inc VAT

YAMAHA SPEAKERS

Ideal for multimedia!

- Front mounted controls
- Excellent sound quality
- Yamaha branded
- Limited offer!

SPEAKERS
POWERED YAMAHA YST-M10
£49 £57 inc VAT

APPLE 8:24 VIDEO CARD

Affordable 24-bit color

- 24-bit color on a 14" monitor!
- 12" NuBus - fits inside all 3 slot Macintoshes
- Limited offer!

BEST VALUE

24-bit VIDEO CARD
APPLE 8:24
£99 £117 inc VAT

APPLE CD-150 CD-ROM

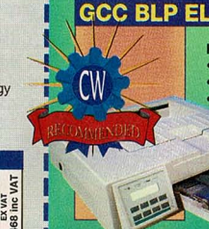
CD-ROM at less than £100!!

- Reads Photo CD's
- Connects directly to any SCSI Macintosh
- Apple brand
- Slimline design

BEST VALUE

CD-ROM DRIVE
APPLE CD-150
£99 £117 inc VAT

GCC BLP ELITE 8 PRINTER



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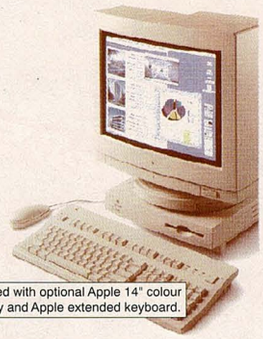
PERFORMA Base Unit



Pictured with optional Apple 14" colour display and Apple extended keyboard.

The Performa Contain:
Base unit with 1.44Mb SuperDrive
Apple Design keyboard & mouse
Apple System 7.5 & Claris Works 2.1

Model	Ram	Disk	
450 4/120	4	250	£635
475 4/160	8	250	£733
630 4/250	4	250	£786
630 8/240/CD	8	250	£987
630 8/350/CD/TV	8	350	£1148

PERFORMA Bundles

As above but also includes monitor

Model	Ram	Disk	Monitor	
450 4/120	4	250	14"PP	£787
475 4/160	8	250	14"PP	£884
630 4/250	4	250	14"PP	£937
630 4/250	4	250	15"MS	£1014
630 8/240/CD	8	250	15"MS	£1176
630 8/350/CD/TV	8	350	15"MS	£1339

PP = Performa Plus MS = Multiple Scan

APPLE POWER MAC

Base Units

Power Macs include base unit with 1.44Mb SuperDrive, mouse, and System 7.5

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7100/66	8/500/CD	£1909
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SOFT WIN emulator bundle		£375
inc Dos 6, Windows 3.1 + 8Mb ram expansion		
8100/80	8/500	£2872
8100/80	16/500/CD	£3049
8100/80AV	16/500/CD	£3171
SOFT WIN emulator bundle		£135
inc Dos 6, Windows 3.1		

Power Mac Bundles

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Apple

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520c 4/160	£1847
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540 12/240 + Express Modem II	£2452
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540c 12/320 + Express Modem II	£3457

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270c 2/240	£1631
280 4/200	£1678
280 12/200 + Express Modem II	£2015
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280c 12/320 + Express Modem II	£2684

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CD300i	£172

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SCANJET IIcx	£678

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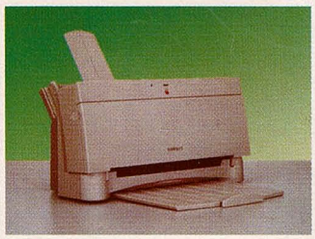

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MACFORMAT NEWS

Apple talks about the future of the Mac, desktop video gets cheaper – and so do games. Compiled by Richard Hill.

Apple partners agree on next generation Macs

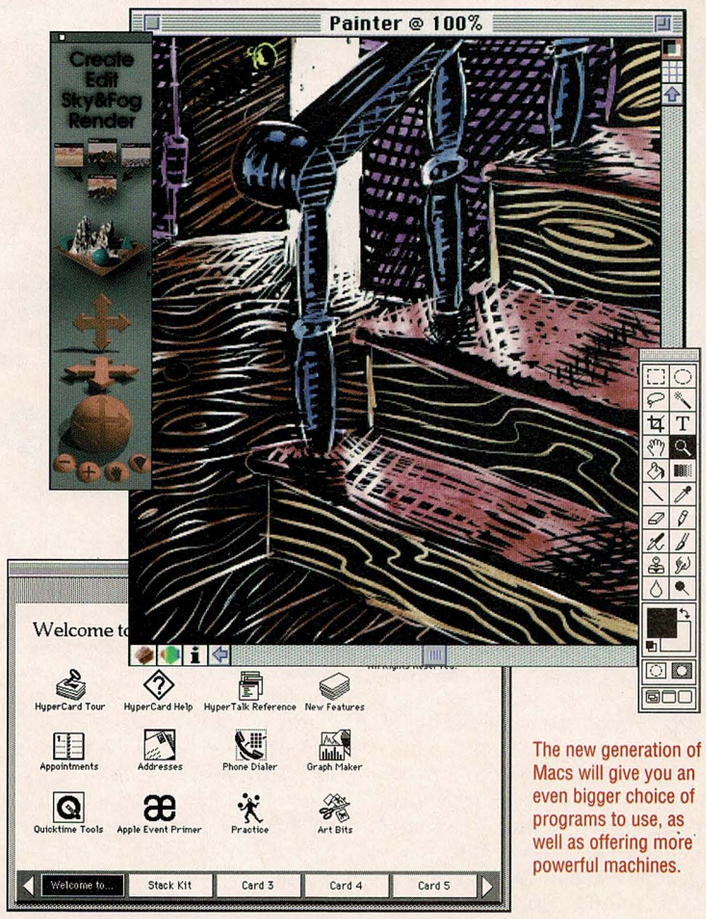
Apple, IBM and Motorola have reached agreement on the standard for the next generation of PowerPC-chip-based computers. Among other things, this means that future Macs should be able to run programs written for other operating systems without needing extra emulation software.

The three companies jointly developed the super-fast PowerPC chip, but so far only Apple has actually brought out a machine based on it – the well-received Power Macintosh range. IBM and Motorola, meanwhile, had agreed on a standard called the PowerPC Reference Platform or PReP – which PowerMacs did not conform to. The new computer specification combines the best elements of PReP and the PowerMac.

PowerMacs are currently capable of running IBM PC software only by using a PC operating system emulator such as Insignia Solutions' *SoftWindows* program. IBM's own PowerPC-based computers were not originally expected to be able to run PowerMac software. But from now on any machines conforming to the new standard should be able to run the same programs. Other companies will also be invited to make computers based on the new standard. Ultimately this will mean you'll be able to choose from a broader range of software that will run on your PowerMac, and a have choice of machines from different makers that can all run your programs.

All this won't happen before 1996, but the agreement reinforces Apple's strategy to get more people using the Mac OS. As MACFORMAT reported last issue, Apple's first step is to attract other companies into making computers that use its operating system. What this means to you is a greater variety of genuinely 'compatible' computers to choose from, more people using Macs and consequently more Mac programs being written.

Further evidence that the Mac is on the up comes in figures showing Apple at the top of the sales chart in the United States. During July, August and September, Apple shipped 640,000 machines to dealers, compared to 600,000 PCs from Compaq and 500,000 from IBM. British figures from research firm Wharfton Information Systems show Apple only narrowly behind IBM during August, with the Mac boosted by strong sales to schools and colleges. New Performas mean the Christmas period should prove equally fruitful.



The new generation of Macs will give you an even bigger choice of programs to use, as well as offering more powerful machines.

PowerMac goes faster

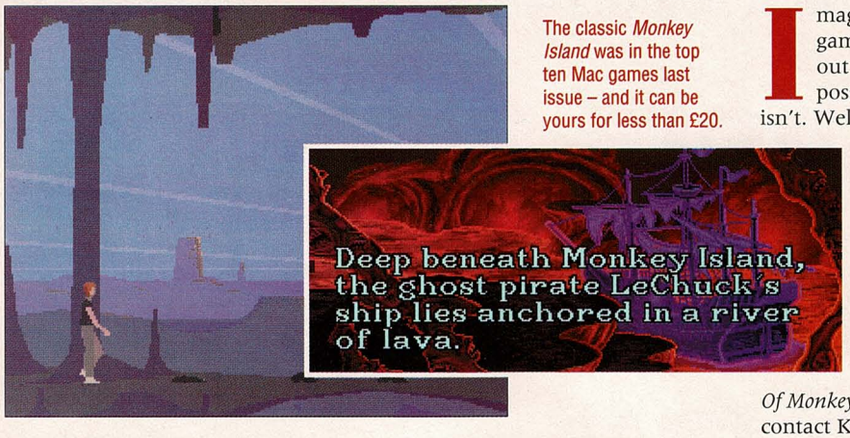
Apple has announced a new PowerMac that it claims to be the fastest ever personal computer. The PowerMac 8100/110 has a significantly faster chip than the current 8100/80, which will remain on sale. It is well suited for professional graphics users involved in TV, for example, because it has an amazing 2Gb (2,000Mb) hard drive, a floating point unit chip for complex mathematical calculations and 2Mb of VRAM, which dictates how many colours your Macintosh can display (most Macintoshes usually have only about 512K or maybe 1Mb).

With 16Mb of ordinary RAM and a double-speed CD-ROM this weighty Mac has a chunky price to match – £5,169, and that doesn't even include keyboard or monitor. At this price it's obviously aimed at the professional not home market, but it does mean that you can mix and match peripherals to get your ideal set up.

Faster versions of the 6100/60 and the 7100/66 are expected but are yet to be announced. If you would like more details contact Apple on 0800 127753.

Budget games hit the Mac

Another World, the French science fiction adventure, is now on sale for £19.99, thanks to the Kixx budget label.



The classic *Monkey Island* was in the top ten Mac games last issue – and it can be yours for less than £20.

Imagine buying all the Mac games you ever wanted without breaking the bank. Impossible? Actually at last it isn't. Well-known budget game label Kixx is starting a line of low-price Mac games, which will cost just £19.99 each. The first three, which are out now, are *Indiana Jones And The Last Crusade: The Graphic Adventure*, *Another World* and all-time great *The Secret Of Monkey Island*. For more details contact Kixx on 021 625 3366.

And everyone else is jumping on the budget bandwagon. Activision has brought out a compilation of five of Infocom's *Zork* text adventures on a single CD-ROM. Despite modern graphic finery being entirely absent, Infocom's adventures have a good reputation. You can make your way through *Zork I*, *Zork II*, *Zork III*, *Beyond Zork* and *Zork Zero* for £14.99. If you would like further information give Activision a call on 081 742 9400.

MacSoft is adding to its range of £19.99 arcade games and simulations with five new titles: *Chess*, *SkyShadow*, *Crystal Quest*, *ParArena* and *Mission Starlight*. All are on sale now. Call the distributor One Stop Computing on 081 780 1001 for more details.

Look out for the low-down on these games in MACFORMAT 21.

PowerMac problems

So, you've got your PowerMac at last. But what are you going to do with all those incompatible games you've got stacked up on your shelf? One MACFORMAT reader bought *Return To Zork* for her PowerMac only to find halfway through the game that it wouldn't work properly. She had no trouble obtaining a refund, but – be warned – PowerMacs and Macs *are* different machines. While the PowerMac's software emulation that enables it to use Mac programs is more reliable than many emulators, games are one area where problems are likely to crop up. This is due to the programmers' tendencies to bend the rules a little to get the best results.

If you use a PowerMac, MACFORMAT recommends you check with the publisher that its game is compatible before you buy it. *Return To Zork* is Mac-only (and makes no claim to work on the PowerMac), but happily, Activision is working on a PowerMac-native version, as well as a patch program to update the Mac version so it runs with no trouble. For further details you can contact Activision on 081 742 9400.

Card offers two computers in one

Mac users who also need access to the MS-DOS and Microsoft *Windows* operating systems will be able to have the best of both worlds early next year, as Apple releases the DOS Compatible Card for the PowerMac 6100. The card, which will only be available for that particular PowerMac for the time being, is expected to be sold by dealers for less than £600.

Fitting the card into your 6100 will give you a PowerMac and a PC in one – if you connect a second monitor to your PowerMac, you can even run both at once. This means you can run programs that require *Windows* and MS-DOS on the Power Macintosh at the same speed as a typical PC – but at a far lower cost than buying an additional machine.

Close dialogue between the two chips is possible with software that enables them to swap data via a clipboard (like the way you can cut and paste on many Mac programs).

The card features an Intel 80486DX2/66 processor, which is one of the fastest PC chips that you can get – although it isn't in the same league as the PowerPC 601 chip. It can have up to 32Mb of its own memory, or it can share your PowerMac's memory.

The introduction of the card follows Apple's experiment with a similar card for the Quadra, which was nicknamed Houdini (see MACFORMAT 15). Unlike that one, this card caters for the multimedia and games crowd, with sound chips that follow the popular SoundBlaster standard and also a joystick port.

The card should be on sale next month. Apple has announced a prototype card that will fit the Performa 630. It also says that it may allow other companies to make cards that will fit into other types. If you would like further details you can contact Apple on 0800 127753.

APPLE BYTES

Apple games console?

A surprise entrant in the ongoing battle for supremacy in the games console market may be Apple. Following announcements of powerful new games machines by Sony, Sega, Nintendo and others, information has leaked out that Apple and Japanese company Bandai are working on a console with more beef than any of these. It's said to use a PowerPC 601 chip, specially-designed new graphics and sound technology and a fast CD-ROM drive. Code-named 'Pippin' for the moment, the new machine may appear as soon as next Christmas – we'll keep you posted.

FreeHand swaps hands

Macromedia, which is best known for its multimedia creator program *Director*, has bought Altsys, adding *FreeHand* and *Fontographer* to its stable of well-known programs. Future versions of *FreeHand* should feature lots more multimedia and 3D facilities as a result. And Aldus had only just returned *FreeHand* to Altsys after Aldus itself was bought out by Adobe...

Big Mac

A new device enables you to display Mac pictures on a TV – whether it's British or American, a small portable or a giant wall-projector. The TVator comes with a remote control that gives you the ability to zoom and pan across the screen, making detailed business presentations simple. You could also connect your Mac up to a video recorder to save multimedia and animated masterpieces on to VHS tape. The TVator costs £464. For more details contact Neutral on 081 599 9902.

Question Mark

In our review of the questionnaire making program *Question Mark* (rated 89% in MACFORMAT 18), the number printed was the company's fax number. You can talk to *Question Mark* Computing on 071 284 3999.

Universal Power Cache

In our accelerator round-up last month we printed a price for Daystar's Universal PowerCache. There are actually two available. One has a 68882 maths co-processor, and retails at about £615. The other one comes without the co-processor and is about £460. To find out where your local dealer is contact Carol Wigham at Aptec on 071 627 1000.

A real screen saver

If you leave your Mac switched on and unattended for hours, the £57.58 EcoMonitor-Mac is for you. It's just like a hardware screen saver, but turns your monitor off rather than just the screen, which of course saves energy. The manufacturer reckons you could make back the cost in little over a year. For more details call Nighthawk Electronics on 0799 540881.

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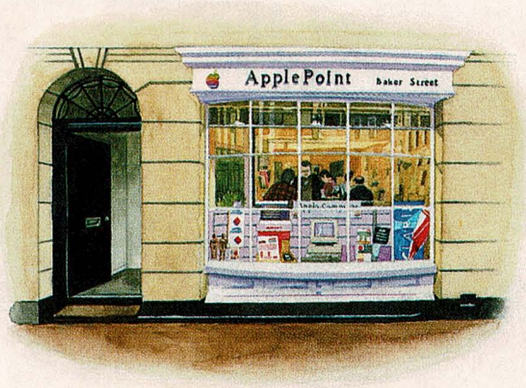

When you take the time to chat to customers . . . first time buyers or experienced Mac users . . . about computers, software, applications, compatibility, you can't possibly compete on price. Right?

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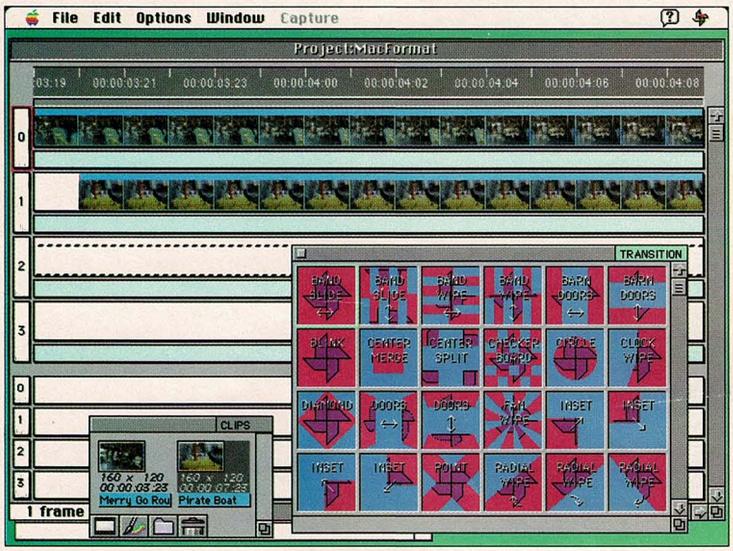
Cutting the cost of DIY multimedia

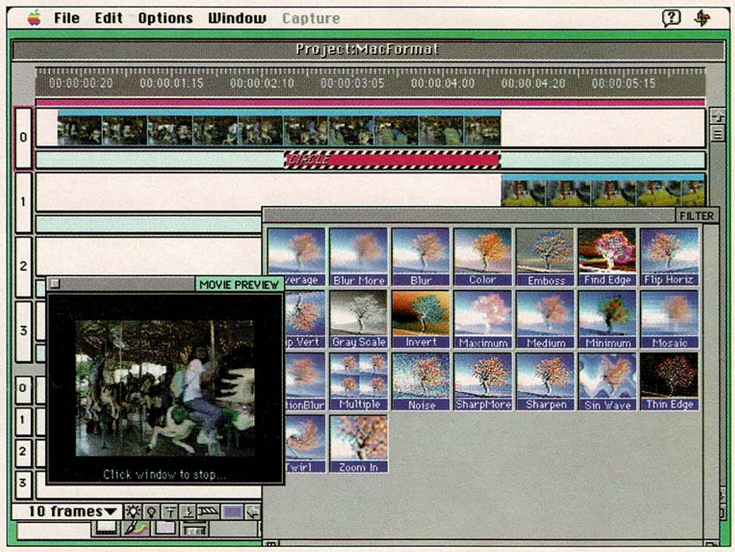
The dream of making your own multimedia is becoming more realistic as prices drop. For a mere £206 you can edit *QuickTime* video clips on your Macintosh. *Media Factory* from NUTS Technologies in Hong Kong uses layers of video channels, enabling you to edit and link several clips into one seamless movie. There is a selection of sophisticated pre-set transitions that enable you to cut from one channel to another. There are filters to alter the look of the images. You can also hook up a video source, such as a digitiser card and camera, to record from real life.

Media Factory joins products like the Performa 630's TV tuner card and the upcoming selection of MPEG video cards (see story below) to provide an affordable set of options that bring your Mac and your TV together. For more details contact NUTS Technologies on 010 852 950 0882.

Look out for our review of *Media Factory* as part of MACFORMAT 21's desktop video special, where we'll be looking at how Mac video is done and what you'll need.



With *Media Factory*, you can join together *QuickTime* video clips to make your own movie. Decide how one clip cuts to the next by picking on the preset transition effects.



You can watch a quick preview of your movie to see how it's going – changes are easy to make. You can also doctor your images with any of a selection of filter effects.

Watch videos on your Mac

Relax with some popcorn and a good video as Video CD comes to the Mac. Two companies are releasing films and music videos in CD form, which you'll soon be able to view with a Macintosh and CD-ROM drive.

Video CD is a new format that's being launched as a potential rival to VHS video tapes and LaserDiscs. It places over an hour of VHS-quality pictures and digital sound on to one CD, meaning most films will comfortably fit on to two. Like a music CD, you can go straight to a particular track or pause it – giving you a perfectly still picture.

Video CD can be played on your television with a special player, or on a Mac. But this is not *QuickTime*-style video in a window – Video CD gives you a full-screen image. To do this, you will need a card that can read the picture format, which is called MPEG. The cards are expected to be released early next year.

Titles coming up from Omnimedia include a selection of music videos from artists including The Clash, Sade and The The, while Castle Multimedia is releasing a film of the Rolling Stones playing Live At The Max among its titles. For more details call Omnimedia on 081 974 6766 and Castle on 081 974 1021.

Meanwhile, CD Vision is adding documentaries on jazz legends Billie Holiday, John Coltrane and Charlie Parker to its extensive catalogue, which also includes animated Superman episodes. If you would like further details contact CD Vision on 071 240 7764.

Matt Johnson of The The, Sade and the Rolling Stones' Mick Jagger could soon be appearing on a Mac near you, courtesy of Video CD.

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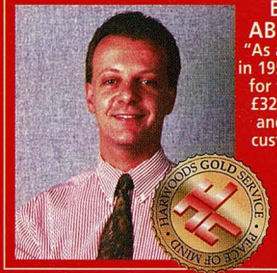

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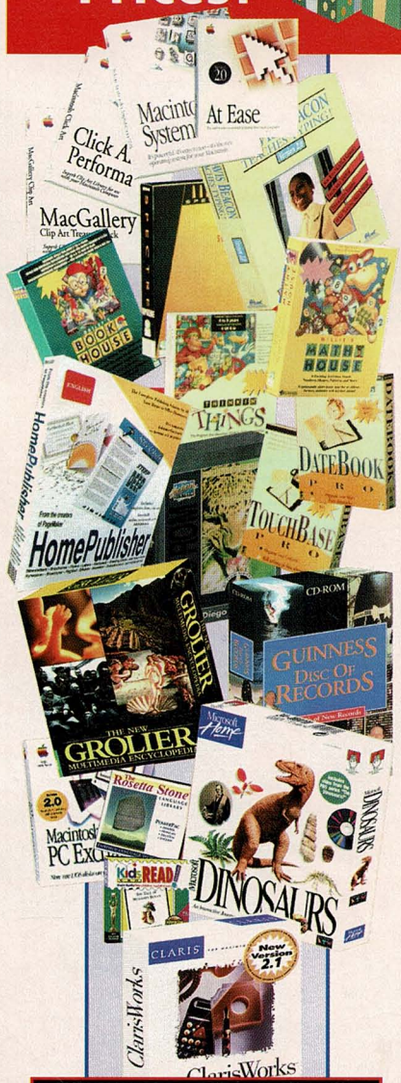

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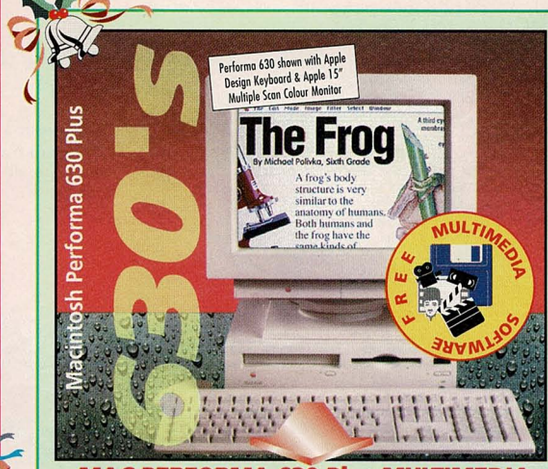
Software titles shown are fully packaged versions. With GH, Free Software Bundles are not packaged but are installed on the Computers' Hard Drive and ready to use. CD Disks are provided unpackaged as appropriate. Software RRPs are based on fully packaged versions as if purchased separately. Software displayed above is for illustrative purposes only.


Performa 630 shown with Apple Design Keyboard & Apple 15" Multiple Scan Colour Monitor
The Frog
By Michael Polivka, Sixth Grade
A frog's body structure is very similar to the anatomy of humans. Both humans and the frog have the same kinds of
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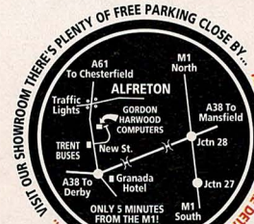

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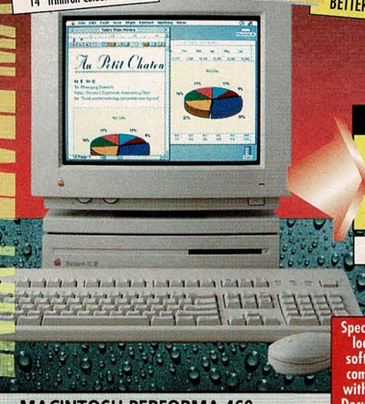

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FREE FROM GH... Claris Works software suite with all GH Performa 460/475 CPU's *(see full details in chart on the right)*

PLUS... Every GH Performa 460/475 is now supplied with System Software, PC Exchange, At Ease and Informational Tutorials

These are CPU prices -don't forget your keyboard & monitor

630-S

Macintosh LC 630 & Performa 630

LC 630 shown with optional Apple Design Keyboard & Apple 15" Multiple Scan Colour Monitor

The Frog
By Michael Polivka, Sixth Grade
A frog's body structure is very similar to the anatomy of humans. Both humans and the frog have the same kinds of

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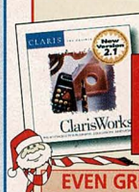

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inc. 15" Monitor & Design Keyboard	inc. 15" Monitor & Design Keyboard	inc. 15" Monitor & Design Keyboard
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SUPER LOW PRICE Whilst Stocks Last!

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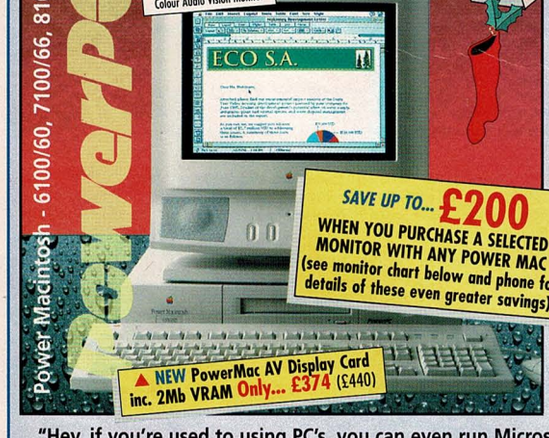
PowerPC

Power Macintosh - 6100/60, 7100/66, 8100/80

PowerMac 6100/60 shown with optional Apple Extended Keyboard and Apple 14" Colour Audio Vision Monitor



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	7100/66 8/500AVCD	£2199	(£2584)
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These are CPU prices -don't forget your keyboard & monitor

"Hey, if you're used to using PC's, you can even run Microsoft Windows on your Power Mac too! SoftWindows upgrade kits are available now... from as little as £119! Run your favourite PC programs right from your Macintosh! Please ask us for details of what you need."

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Apple Colour Monitors

Genuine Apple Monitors from only... £155 (£183 Inc. VAT)

MONITOR PRICES	Bought with CPU		Purchased Alone		Purchased with a PowerMac
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14" Trinitron (.26)	£249	(£293)	£265	(£312)	from £165
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17" Multiple Scan (.25)	£699	(£822)	£739	(£869)	from £539
20" Multiple Scan (.26)	£1459	(£1715)	£1499	(£1762)	from £1299

Just pick a monitor that connects to your CPU. You may be able to add more Video RAM (VRAM) to increase maximum colours displayed.

LC III/Performa 450 - Performa 475 - Performa 630 - PowerMac 6100 - 7100 - 8100

17" 20" 17" 17" 20" 20"

"Don't forget when you buy a monitor WITH your Mac CPU... GH give you a generous reduction on the price of your chosen monitor!" (see chart left)

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(Apple printer driver software is due for release very soon)!

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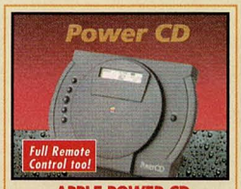

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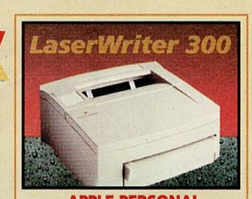

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GTi 8000	FULL Photoshop	£895 (£1052)
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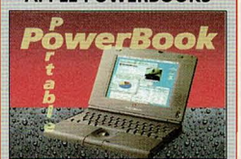

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540Mb Capacity	£299 (£352)
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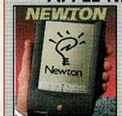

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24 bit colour, stores up to 32 images, auto exposure -1/30 to 1/175, f2.8 to f16,auto flash etc!

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System requirements: Apple™ Macintosh™ with a min. of 4Mb RAM and 10Mb. of free disk space operating on System 6.0.4 or higher and a SCSI bus with one free device plus a colour monitor with a minimum control panel setting of 256 colours capability.

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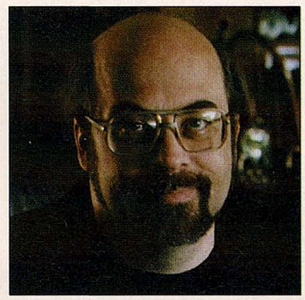
MACROSCOPE

Meet the man behind *Painter*, discover why Mac sales are suddenly surging, and visit a virtual show with Josef Morell. Compiled by Richard Hill.

State of the art



Mark Zimmer of Fractal Design: 'It's a matter of satisfying artists that the computer doesn't get in the way.'

The Mac has a mixed reputation when it comes to art, like most computers. It's revolutionised the production of slick, clinical graphics. But few artists would use a Mac for watercolours or pastels. Mark Zimmer aims to change that... He's the President of Fractal Design and one of the people responsible for Natural Media programs like *Dabbler* and *Painter*. These programs can reproduce the effect of traditional artists' tools, making the same kind of marks on simulated grainy paper.

Zimmer and Tom Hedges, two of the founders of the company, worked together at Letraset as developers of graphics programs, including *ColourStudio* and *ImageStudio*. After they left the company, Fractal Design was born – at first specifically to sell *Painter*.

'With *Painter*,' Zimmer says, 'we introduced natural paper grains and brushes that behaved more like felt pens than ever before. What we specialise in doing is bringing new, often untried, technology to the graphics marketplace – stuff that has never appeared before.'

Painter is less an art program than a program for artists, Zimmer says. Use it for a while, preferably in tandem with a graphics tablet, and he reckons you'll start to forget you're using a Mac. Instead, you'll be playing with a box full of pastels, chalks and water colours. You can even tip your computerised canvas so as to draw at whatever angle you like. *Painter* can handle everything that's been covered in MACFORMAT'S Natural Media series (see MACFORMAT 14 onwards).

Zimmer believes that using the Mac and achieving a handmade feel in your artwork are not necessarily mutually exclusive. 'It's really a matter of satisfying artists that the computer doesn't get in the way of producing the art that they're used to. They've spent years developing talent that they should be able to transfer to a computer – so we try to present an environment that's as natural to them as the one they've used in the past.'

Many of the new ideas in *Painter 3.0* have their roots in a windy week in Chicago. 'John Derry [another Fractal Designer] and I were in Chicago for a show, and we went and bought a couple of notepads and started filling them with ideas. One of the ideas that went in was the ability to take the real world and paint directly with it. You point at a texture and say, "I want to paint with that texture." So as the thinking went on we eventually developed the concept of the Image Hose – along with several other interesting things as well.'

Painter 3.0 enables artists to create traditional brush-stroke-effect pictures, as well as clinical, futuristic images.

The Image Hose isn't just another traditional artist's tool for your Mac, but a new direction. Zimmer explains: 'You know how you can spray water on to a garden at will with a hose and it falls wherever you want it to go. With the Image Hose, you can take clips of images and spray them directly on to your work.'

Zimmer says that the technical side of getting the Mac to act naturally isn't too difficult. 'Programming is pretty different from coming up with the ideas and developing them. It's just like driving a car – after a while you forget about the details and concentrate on the task in hand. The real challenge is to find a method to model the way the real world works in a logical fashion. This is really all that computers do – doing something you could do yourself, only lots of times faster.'

■ *Painter 3.0* review, page 56. Try it for yourself with the usable demo on this issue's CD-ROM!

MACROSCOPE

Mac explosion!

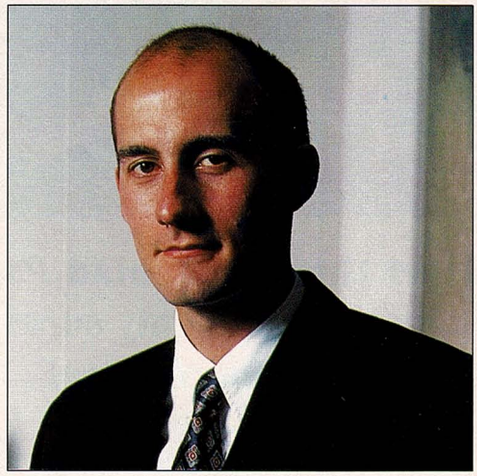
One million home computers are expected to be sold next year – many of them Macs. An explosion in first time buyers should send sales rocketing to around 700,000 this year, a million next year and even more in 1996, acccording to major computer manufacturers.

'It's down to price,' says Mark Floisand, who oversees Apple's Performa range – which is being targeted at new users. 'At the beginning of last year you started to see products that were comfortably sub-£1,000. What that meant to the home buyer was that a computer then fitted on a credit card. Suddenly that opens up a market all in its own right.'

On top of this, computers are often in the public eye, says Floisand. 'You can be watching *News At Ten* and suddenly there's a report on the Internet. Sure, not every person at home is connected to the Internet – not by a long shot – but computing terms are being talked about, right up there with politics and everything else we're familiar with.'

A third reason for growing sales is simply the pressure of change, he says. 'Children are using them at school and what we're seeing from parents is a recognition that they either embrace the technology, or the gap between them and their kids grows even further.

'What they've seen is their kids growing up on consoles and video games – it's what they talk about, and it's what they do. As those kids get a little bit older, they're using computers, and they're doing elementary programming. They're certainly working with CD-ROMs at school. Some parents are now seeing it as an opportunity to catch up with their children, to go through an encyclopedia and help them with their homework.'



Mark Floisand of Apple is keenly aware of keeping up with the demands of consumers: 'We need to listen to customers, making sure we have products that fit what they want.'

The challenge lies in convincing each person that he or she needs a computer, Floisand says. 'While people in small businesses or the home office rely on the computer as part of their work and understand that it's an essential piece of their life, this reliance on the computer has not yet found its way into the home.

'What people are starting to see is that there are things they could be doing with their computer that maybe they do manually at the moment. If they can do those at the same time as helping their kids' education, and improve their correspondence with their bank manager and so on, then that's great. What you don't get is people saying, "I'm going to buy a computer just to type one letter." They have to see a package of reasons to justify the purchase – in the same way that I probably wouldn't buy a television just to watch BBC1.

A computer is still not something that's as clearly understood as a video recorder.

'What we've had with the 630 has been people saying, "OK, I can see why I'd want a computer, but why would I want a TV built into it?" When you go into the process, for example, of looking at video editing with their camcorder, you immediately see the intrinsic use of the computer. They've already been out and done their homework and found that an equivalent video editing suite costs them an arm and a leg – if this is yet another thing that their home computer can do for them, then that's just one more thing on the list of many that they can bring into the household.'

People are realising that computers are becoming a more intimate part of everyday life, but more education about what the machines *do* is needed, says Floisand. 'One of the things that's challenging for all computer manufacturers is that a computer is still not some-

thing that's as clearly understood as a video recorder, which most homes have. I don't think we've quite got the awareness of what a home computer does at that level yet.'

All the computer manufacturers, Apple included, are trying to find out who their new customers are and what they want. The old days of focussing on business users and assuming – usually correctly – that the home users were enthusiasts who could take care of themselves are over. Business demands powerful technology to keep its competitive edge, and also has the money to pay for it. Now Apple has to learn to adapt to a new set of demands.

According to Mark Floisand, 'When we do our research and we talk to customers, one of the things that comes to us frequently is, "Ah, the thing with computers is the moment you buy one, it's out of date" – it's like an encyclopedia but much more expensive.

Parents recognise that either they embrace the technology, or the gap between them and their kids grows.

'That's a real concern in consumers' minds and they've every right to be concerned. It's probably one of the fastest changing technologies that's available on the market today. Things like televisions improve incrementally.

'What Apple has managed to do in the past is continually show that we have a strong upgrade path. If you look at hardware technology, the development of the PowerPC chip is obviously a significant change in Macintosh computing. So what you've got with something like the 630 is a forward upgrade path.

'What we find with home buyers is no, they don't buy every year – absolutely not! Especially with family purchases. We want to be able to reassure people that throughout the life of their computer, should they want to, they can upgrade it or plug something else into it. If you look at the Performa range – the 460 is upgradable to the 475, and all three Peformas can take a PowerMac chip.

'The fact that consumers can have all these things later should they wish, and won't be left behind, is very reassuring.'

Floisand is confident that Apple has what it takes, not only to hold its own against its competitors from the PC-compatible platform, but also to take the Mac to new heights of success. He cites the Performa 630 as an example. 'What we see there is an amalgam of traditional Macintosh computers along with what are currently regarded as the things that make a multimedia computer: CD-ROM, speakers and CD-ROM titles. And you've got the video connection and the TV tuner built in there as well, so from a home entertainment point of view, we've gone the whole hog and built all that into the product.

'We expect the consumer market to outgrow any other market – and we need to be a part of it. We need to keep listening to customers, making sure we have products that fit in well with what they want.'

Gizza job!

Even the best of Macs is a white elephant for business if the employees can't use it. Expensive, and potentially very useful, hardware demands staff with Macintosh savvy. A good place to get them is to pick up the phone and call MacAddicts International.

'We started MacAddicts to say, "Look, you've got Macs, you're going to need some people – we've got them,"' says Andrew Walter, Senior Partner in this latter-day temping agency.

'When we started the company we tried to make it all things to all men. If you looked at the magazines it was all "new releases, upgrades!" Everything was bigger, faster, more – but there was nothing in there about people, about training and skills development.'

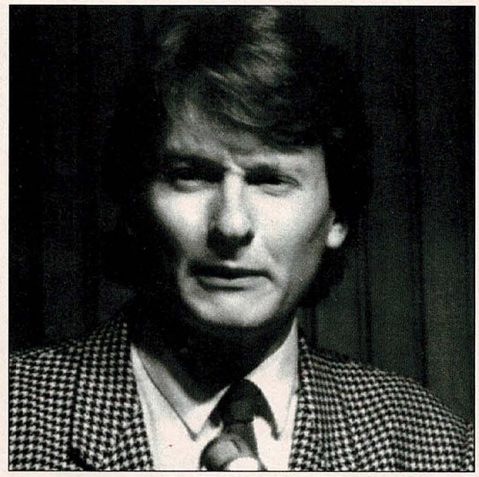
MacAddicts International is one of the companies that exists to fill this gap. It talks to business clients, discovers their needs and finds on its books the right people for the job. It specialises in the corportate communication area.

'We recruit individuals skilled in areas where Macintosh productivity is more important than creativity,' says Walter. 'The Mac has a very secure foothold in the desktop presentation market – particularly with management consultants and corportates.'

MacAddicts has been successful over a number of years, but now it faces rapid changes in technology and the way we use it. New elements are emerging, like CD-ROM, multimedia and the Internet. This means MacAddicts needs adaptable temps.

'For companies like us to survive we have to become a kind of jack-of-all-trades,' says Walter. 'We make a point of reading magazines like MACFORMAT. We have to know enough about multimedia to talk about it, know enough about the Internet to talk about it; the same with Apple licensing clones and so on. We have to know a little bit about everything rather than a lot about one thing – and I'm an expert at that,' he laughs.

The buzzword on his lips is 'bandwidth'. It's



Andrew Walter: 'You've got Macs, you're going to need some people to use them – we've got them.'

a term coined by Macintosh author Guy Kawasaki, and can be paraphrased as: 'a human being's ability to contain new and diverse bits of information and not explode.'

Walter says: 'The big change that's going on at the moment, with our temps, our clients and with us, is expanding the bandwidth.'

He feels that the lack of knowledge in some parts of the Mac industry is something that his company can take advantage of. MacAddicts is diversifying into areas like translation services for multinational companies – using electronic mail to deliver translated documents to the other side of the globe in next to no time.

He reckons that certain skills will always be in demand: 'For us, you can't get a better combination than *PowerPoint*, *Word* and *Excel*. If you've got these, we'll book you up tomorrow.'

Yet he also thinks that a wider perspective can and will pay dividends: 'If you're asking me what's the biggest tip you'd give to people who are looking for good, exciting jobs in the Mac industry today, I would say: "Learn and know two or three software products brilliantly, but have a good peripheral understanding of international issues, new technology and the implications of things like Apple licensing. Don't worry about being an expert, just be aware."'

ON-SCREEN EDUCATION

Help is at hand for baffled parents who've bought a Mac 'to educate the kids'. The National Council for Educational Technology (NCET) has published an information pack giving suggestions about activities you can try and programs you can buy.

There's even a video produced by NCET that gives further ideas about things to do to help your child's education. The video is available for loan to schools (for a parents' evening, for example) and to individual parents as well.

NCET, which is a Government funded agency, also joined forces with Birmingham LEA and Selly Park Girls School to hold 'a family fun day in'. Sessions at the free event included: Choosing a computer, Learning about information technology and Getting a job with computers. The sessions themselves were organised, run and presented largely by the children. NCET is investigating the possibility of working with other organisations, schools and education authorities to repeat the event.

Most of the material from the pack is also available on the Internet on NCET's site – http://ncet.csv.warwick.ac.uk/WWW/menu/index.html. The pages at the site are updated regularly and contain information for parents and teachers. It's well worth a look.

If you're interested in obtaining the materials, borrowing the video or running a fun day at your school, contact Jenny Brown or Julie Wright at NCET on 01203 337014, write to them at NCET, Milburn Hill Road, Science Park, Coventry CV4 7JJ or e-mail them at jenny_brown@ncet.org.uk or julie_wright@ncet.org.uk. *Phil Moore*

MACROSCOPE

This Month

Macworld, Apple Expo, FES – Josef Morell's been there, seen it and had enough. But xpand xpo was different. This show he visited with his feet up...

Look, I've had it with shows, all right? In the last four weeks I've been to three (working at them, that is, not just visiting for a day), and I've had it up to here with the damn things. Those of you not using the interactive multimedia *QuickTime* enhanced version of this column will just have to guess exactly where I've had it up to, but you can assume it's pretty high.

First there was MacWorld Germany (rather like one of those dreadful Horticultural Hall computer shows that were around in the early '80s), then the hot and overcrowded Apple-Expo, and lastly our very own Future Entertainment Show. Sick of 'em, I am. Sick.

So you can imagine my delight on returning from the last of these week-in-a-crap-but-cheap-hotel epics to find in the huge pile of post – yet more shows.

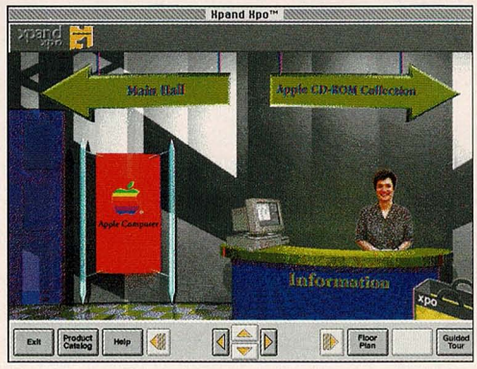
Not content with the punishment of Apple-Expo, *MacWorld* magazine is starting its own show in February. Strangely, though, it's not called Macworld Expo, like the ones run in virtually every other country, but the Mac Shopper Show, and the venue is the less-than-huge Alexandra Palace. Mac Shopper is a name that our friends at *MacUser* like to think they own the rights to, so don't be surprised if the name changes before the event. We'll bring you more details on this show when we have them.

Meanwhile an American company called xpand (*sic* – the shift key's the one on the right, love) has decided to take all the feet-aching hard work out of shows by creating an entirely virtual CD-ROM based one.

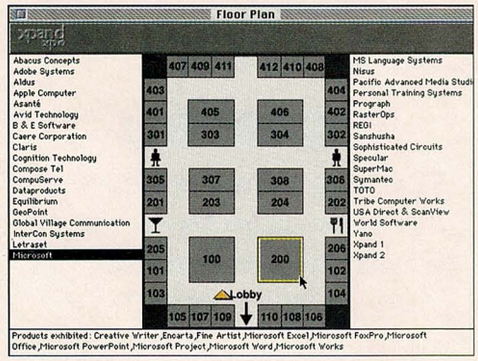
This seems to me to be an excellent idea – as it does to the MACFORMAT team, who as I write are busily putting together a multimedia interactive exploration of Apple-Expo that you'll get to see on the CD next month. But the xpand disc is completely virtual – this show has never existed.

You move around the show in a way that will be totally familiar to users of games like *Myst*. When you enter a stand, you can click on a Mac to view a movie of the product or drag a brochure or demo disk into your very own show carrier bag. When you leave, the contents of your carrier bag are copied to your hard disk.

In you go, carrier bag at your virtual side. But where are all the hordes of people?



Some things don't change in the reality-CD-ROM transition. That smile is exactly like the 'real' one receptionists wear.



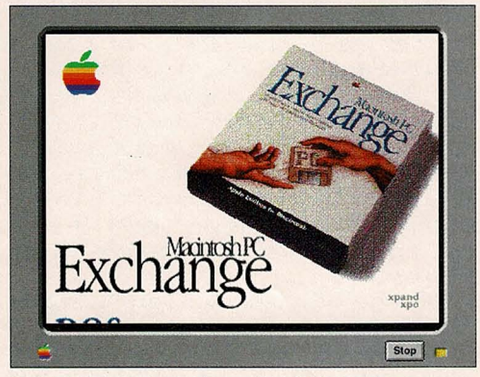
Floor plans too! Although it's beyond me why they've provided virtual restaurants and virtual toilets...

This method of working is very cute, but gets a bit irritating after a while – I just wanted to jump in and run all the demos. But you can't because they are hidden files on the CD, only accessible through the xpand interface. There is a search mechanism, but it has one of the most counter-intuitive and hideous interfaces I've ever had the misfortune to use.

If I sound like I don't like it, then I'm giving the wrong impression; xpand xpo (strange keyboard these guys use, no 'e' either) gives a great deal of information about a huge range of Mac products in an easily digestible form, and it's a damn sight cheaper than going to Boston or San Francisco for one of the 'real' shows.

A single issue of xpand xpo costs £12.95, and a four issue subscription is £19.95. Call xpand on 0709 855497 or e-mail xpand@netcom.com. If you have some interestimg Mac gossip, why not let me know – in confidence and entirely anonymously, of course! You can E-mail me at josef@futurenet.co.uk.

Josef Morell



Ah. Now *if* you've brought your virtual PC along in your virtual carrier bag you can try out this demo 'at' xpand xpo.

55 fonts for only £49.95

MACFORMAT and top font maker Monotype have got together to bring you an exclusive font pack. We've chosen 55 of Monotype's superbly crafted text fonts. These are genuinely useful fonts that you can use to enhance your documents and make them truly unique. You'll find no silly headline fonts here; it's 100% top notch main text fonts all the way. All the fonts work with any printer, including StyleWriters, DeskJets and LaserWriters.

You can only buy this font pack from us, and we're offering it at an incredibly low price – just £49.95, including VAT and postage. That's well under £1 per font!

Attention design professionals: these TrueType fonts use exactly the same font metrics as the PostScript versions, which makes them ideal for visualisations and proofing work. And they cost just a fraction of the amount you'd need to lash out to obtain the PostScript fonts!

Baskerville MT Semi Bold
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PpQqRrSsTtUuVvWwXxYyZz

Baskerville MT Semi Bold Italic
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Plantin MT Light
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Plantin MT Light Italic
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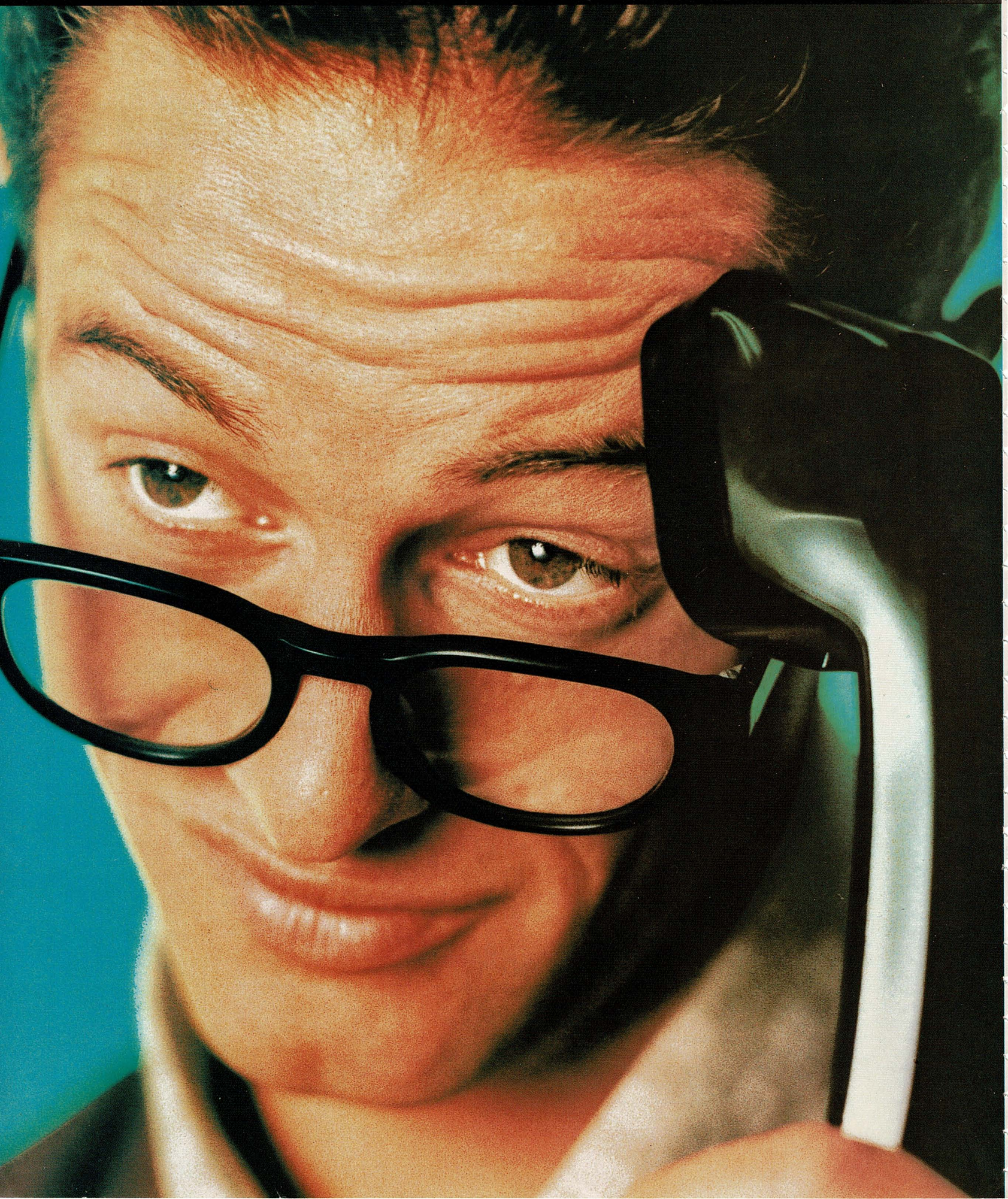
You bought a Mac. And then a few more. You tied them together. People started sharing.



Now they're sharing their frustration. With you. Time for a Workgroup Server.

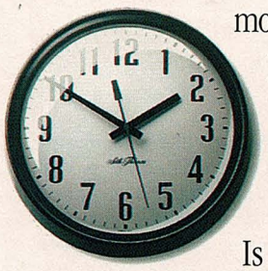
That's the funny thing about the Apple™ Macintosh™ computer. With little fanfare and an idea known simply as 'plug and play,' it turned a whole group of novice users into networked team players.

Is it any surprise? Just plug a connector into the back of a Macintosh and you're networked. You can share files, printers – virtually any computing resource.

For some users this is the only kind of 'peer-to-peer' networking they need. Others, however, find they need a Workgroup Server, dedicated to improving the productivity of their team or department.

So how do you know which is right for you? Just ask yourself some simple questions.

Do I have more than five networked computers? Has printing begun to slow down my Macintosh? Am I sharing more and more files with more and more people? Is that essential information locked up on someone else's Macintosh?



Is there a danger of losing vital information? A 'yes' to any of these questions means it's time to consider an Apple Workgroup Server.

Apple Workgroup Servers provide the industry's easiest to manage centralised information store.*

Users can share files, ensuring they are available to just the right people at the right time. Without losing information or slowing systems down.

Apple Workgroup Servers also provide ways to share network applications and services, like accounting programs, databases, e-mail, calendars and more.

And that is just the beginning. With our integrated print spooling software users can free-up their Macintosh computers from printing jobs much faster, enabling real gains in productivity.

With Dantz Retrospect Remote® software† you can schedule automatic back-ups of both server and individuals' Macintosh desktop data across the network – automatically. Never has your information been so secure!

With FileWave®‡ software you can simplify the management of upgrading or installing new software. FileWave automatically checks the networked Macintosh systems, ensuring that key applications and documents are uniformly maintained at the correct version.

And using Apple Remote Access software from Apple, even mobile PowerBook™ users can be managed. Apple Remote Access allows users to exploit their network services from anywhere in the world – across any time zone – as if they were on their local network.

Viper Instant Access™§ is a high performance application for fast access to reference information such as telephone numbers, price lists, product and people details, without the overhead of a general database application.

Central administration ensures both consistency and guaranteed availability – at any time.

So how easy is an Apple Workgroup Server to use? As easy as a Macintosh. And choosing the right Apple Workgroup Server for your needs is just as easy.

We have a complete family of products, including our newest models based on highest performance PowerPC™ technology. If this hasn't convinced you then browsing through our Apple Workgroup Solutions Guide will undoubtedly reveal the perfect solution from the breadth of software and hardware available.

To get your hands on our Solutions Guide – and for the name of your nearest Apple Authorised Reseller – call 0800 234800 today. And get the power you need most from your workgroup environment.

Apple

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WHAT'S NEW

The new low-down on the latest hardware and software, from the brand-new high-tech Hitachi monitor to an esoteric fishtank simulator. Brought to you by Richard Hill.

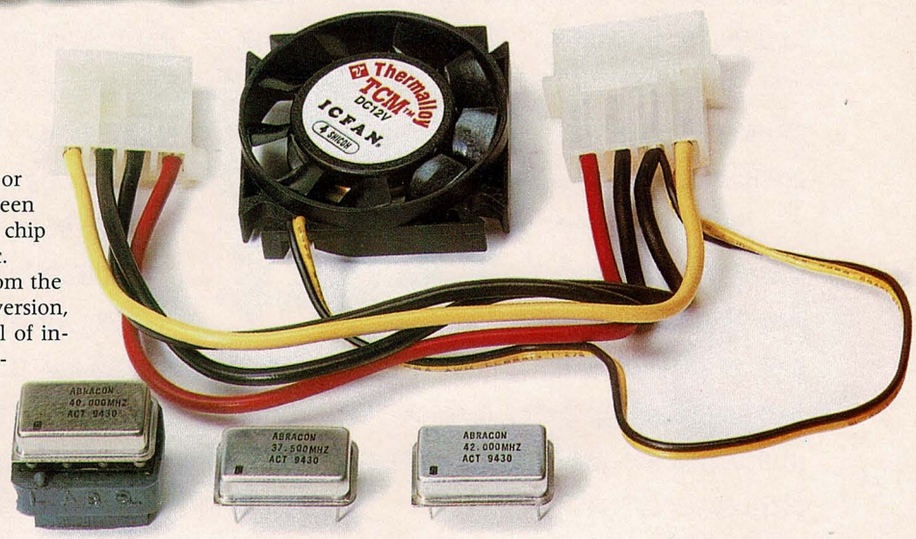
KS Alacrity

Strange name for a piece of kit, but 'alacrity' means 'liveliness' or 'briskness' – and with its new accelerator, KS Labs might have been looking for another way of saying 'bloody quick'. The Alacrity chip takes only five minutes to fit and certainly does speed up your Mac.

Alacrity is available for PowerMacs or for a selection of Macs from the Quadra range, or the Centris 610. We fitted the PowerMac 6100 version, which speeds the main chip up from 60MHz to 80MHz. The level of increase varies according to the type of Macintosh you have. However, you might find that a few individual Macs can't handle the pace and your programs might start going wrong. But don't worry because there's another kit included with the Alacrity chip that accelerates the chip to a lesser degree.

Fitting the kit is easy. All you have to do is remove the top of your Mac, clip a mini-fan on to the top of the main chip and the Alacrity chip fits on to the clock chip, which controls the speed. Clip the top back on and you're away.

It ran smoothly enough while we had it fitted and boosted performance by between 28% and 34% on various processor functions. As with all extra boards or chips, fitting Alacrity will invalidate your guarantee, but insurance is included in the price. One concern is that for some reason the Quadra/Centris version bizarrely renders Ethernet networking inoperable, but the increase in speed is difficult to dispute.



Give your Mac some welly by slotting in one of these crystals and inserting the cooling fan.

■ **Price: £234.99.**
Requires: PowerMac 6100, 7100 or 8100; Centris 610; Quadra 650, 660AV or 800. Different kit supplied according to model.
For more details contact Domain on 091 266 8998.

Xyratex MOlite

For anyone who is looking for extra storage space, Xyratex brings you the MOlite drive. It uses magneto-optical disks that can each store up to 230Mb and only cost around £32 a piece.

At first glance you may think that these look something like thick floppy disks, but if you have a closer look (carefully pull back the metal flap, that is), you'll find what resembles a CD-ROM. In fact, a magneto-optical disk is a combination of both a floppy disk and a CD-ROM.

The MOlite comes in two parts: a stand and some essential software. The stand enables you to keep the drive on its side. It's simple to use: just plug it into your Mac's SCSI socket. The software enables you to use the drive or you can use a program like *SCSI Probe*, which can detect drives connected to the SCSI port.

The drive works in the same way as a hard drive: you can read off it and write on to it as much as you wish. It's about 25% slower than a hard drive, but this is an acceptable loss when you can buy all this extra storage space for so little money. An added bonus is that the drive doesn't feel sluggish while you're using it, and is virtually silent.

■ **Price: £881.**
For more details contact CMS Peripherals on 071 740 0202.

Yamaha YST-M10 speakers

If the Mac's going to be an entertainment centre as well as a business tool, then it needs a funkier sound system. Beeps and quacks aren't particularly impressive. But now, thanks to Yamaha, the M10 speakers can provide your Mac with an amazing THADDOOM. If you're exceptionally lucky, you'll have snapped up one of the scarce AV Macs and won't know what all the fuss is about, but most of us need the sonic first aid of the M10s.

The M10s are simple to use, coming only with volume and tone controls. They have one lead that plugs into your Mac's loudspeaker socket and goes to the left speaker, and another one that connects the left and right. This gives you stereo sound, making those WHOOSHes that sweep from one speaker to the other highly atmospheric. It's a shame the lead connecting the speakers couldn't have been longer though, so you could have them further apart to enhance the stereo effect.

The overall sound quality is excellent, with a two way system capturing the highs and lows. With the size of the speakers, they may have some trouble when it comes to particularly low RUMMMBLEs, but the effortlessness of the KA-ZAPs and NEEEOWWMMs more than makes up for that one minor deficiency.

■ **Price: £69.**
For more details contact Yamaha Media Technology on 0908 366700.

Aquazone

*Aqua*zone brings the peace, tranquillity and soothing water sounds of the fishtank to your Mac. Loading the program fills your screen with simulated water, where you can lovingly raise a shoal of your very own tropical fish. And design your own environment of plants, rocks and, of course, miniature plastic castles.

Watching the fish swimming around their home is restful enough, but *Aquazone* also offers, believe it or not, the high-adrenaline challenge of maintaining the fish as they feed and breed. Through carefully adjusting the food level, changing the water, the types of plants, gravel and combinations of fish, you can create a flourishing colony – but watch out for the authentically reproduced fish diseases.

And it doesn't end there. When you tire of the fish and accessories that come with the package, there is a catalogue of supplementary disks of extra fish and plants for you to add to the tank. We look forward to their next wonderful endeavour.

From backgrounds that you can customise and accessories that you can place anywhere, to individually named fish, everything you need to make your very own aquarium family in a matter of minutes is in *Aquazone*. It's the best thing since Sea Monkeys.

■ **Price: £47.**
Requires: any colour Mac with System 6.0.7 or later and 4Mb of RAM. Mac II and IIcx owners require either System 7 or *QuickDraw*.
For more details contact Gomark on 071 731 7930.

QueStick

This new wave of Mac games is all very well, but a mouse and keyboard can only get you so far when it comes to demolishing aliens or crashing planes. If you want to do the job properly, you need a joystick. The QueStick is one of an oh-so-slowly growing selection available exclusively for the Mac.

The QueStick's designed to plug into the keyboard socket where the mouse lead usually goes. There's an extra socket in the base of the joystick so you can plug the mouse in there. It comes with a long lead so you can sit a good distance back from the screen while you're zapping those aliens – although you might be hampered by your mouse if you insist on taking it; it doesn't have a long lead.

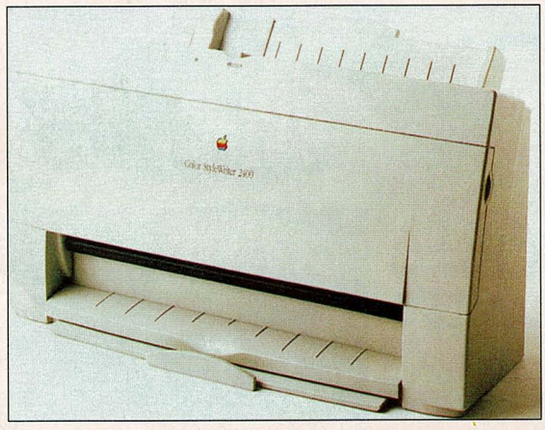
The Questick comes with a program that enables you to configure the joystick swiftly and easily. And then you can start playing – which is where the problems start. The QueStick isn't the sturdiest model on the market. There are no microswitches, which give you that satisfying, robust click as you move the stick in any direction.

Other types of computer have perfectly durable and responsive joysticks for a tenner, so it's a mystery why the QueStick should cost over £80. If manufacturers want to charge Mac owners so much more, they must pull their finger out and earn it.

■ **Price: £82.24**
For more details contact Softline on 081 401 1234.

BOX OF DELIGHTS

New printers from Apple



A boom in colour printing has been predicted over the next few years, and Apple is hoping to join in with its latest in its popular printer range: the Colour StyleWriter 2400.

The Colour StyleWriter 2400 is the latest in the popular printer range from Apple. The £469 printer is based once again on the well-regarded Canon printer design, which prints at up to 360 dots-per-inch. There is a paper tray that can handle up to 100 sheets, while 64 TrueType fonts are also included. The StyleWriter works only with Macs that have System 7 and 4Mb of RAM.

Also from Apple comes the £1,996 LaserWriter 16/600 PS, which is capable of printing up to 16 pages per minute. Its 600 dots-per-inch print resolution is accompanied by built-in detail enhancement. A £276 card is also available – when plugged into the printer, it enables it to send and receive faxes at the same print resolution. To use the LaserWriter, you'll need a Mac with System 7.1 and 4Mb of RAM. For more details contact Apple on 0800 127753.

Reno

The £299 Reno Personal CD-ROM Player is the first CD-ROM drive to come from Media Vision, a company best known for its sound cards up until now. The Reno is a double-speed drive, which means it can handle the demands of current software. It also doubles as a portable audio CD player. If you would like more details you can contact Media Vision on 0494 465050.

Take the Reno CD-ROM out of its drive and you have a music CD player.

MD Data

Sony's MiniDisc format was launched as a rival to music CDs, but as yet hasn't won over a mass audience. But now, as a challenge to removable cartridges and magneto-optical disks, Sony is developing the MiniDisc as a format for storing computer data.

Two drives are due for release next month: the MDM111 and the MDH10. The MDM111 is a drive designed to fit inside your Mac, while the MDH10 is a battery-operated portable drive for PowerBooks. Each disc can store up to 140Mb and can be pressed in one of three different ways depending on how it's going to be used. You can have a fully-writable disc for personal use or for multimedia programs, or a CD-ROM-style disc that can't be changed. The third type of disc is a hybrid where some data is protected while other parts can be changed. Just imagine using a program or game and saving your current settings without using up any valuable hard drive space, and you'll see it's got bags of potential.

Prices for drives and discs have yet to be set, but MACFORMAT will bring you more details soon.

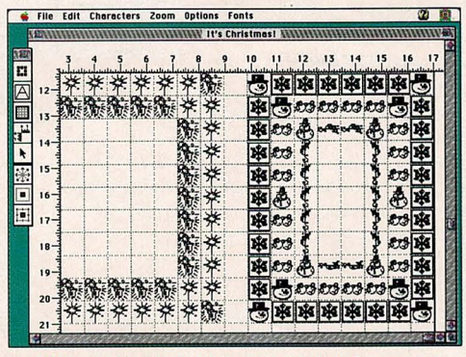
Hitachi monitors

Hitachi has added two large new monitors to its range. The £2,056.25 HM4821 and £1,821.25 HM4820 have 21-inch and 20-inch screens respectively, and are stuffed with features that give a steady picture. The refresh rate, for example, can range between 50Hz and 152Hz, which means you shouldn't notice any flickering. For more details contact Hitachi on 0628 585000.

BorderMaker

Better known for its fonts, Monotype has a new program called *BorderMaker*. With this £57.58 package, you can create decorative borders for use in desktop publishing documents. To do this it uses fonts, which are atypical in that they're not made of letters and numerals but of symbols and other patterned designs.

You'll be able to buy extra *BorderMaker* Font Packages to extend your design options. Prices for these are expected to start from £123.38. For more details contact Monotype on 0737 765959.



With Monotype's *BorderMaker* you can design your very own decorative borders to use in all your desktop publishing documents, with just a few clicks of the mouse.

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by Stephanie
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Saturn: The 6th planet outward from the sun.
The rings of saturn were first seen by Galileo, using his telescope. Later, the rings seemed to disappear when Saturn moved so that the rings were tilted so that they were edge-on to
art
I like cats and sometimes I even wish I was a cat.
I painted this picture using the BrushStrokes painting program and I scanned in a photo of my face from home and pasted it on to the cat.
'Cat Mat' by Josie Powell
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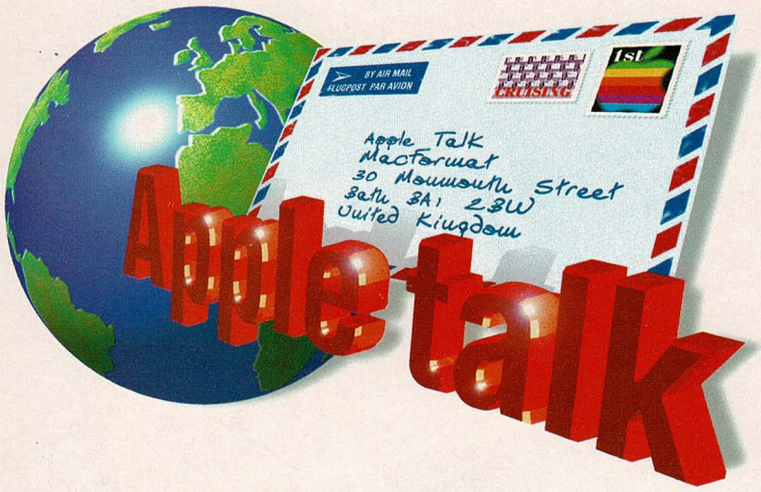


If your letter is published here, you won't win a T-shirt. But all's not lost! Write to 'Apple Talk', MACFORMAT, 30 Monmouth Street, Bath BA1 2BW.

No, you can't have an exclusive MACFORMAT T-shirt if your letter is published on these pages. If it were up to me, sure, you could have two if you wanted, but it's out of my hands. It's even out of Stuart the Publisher's. There just aren't any left, you see, so we're now giving away a splendid MACFORMAT *binder* for every letter published here. Write right now!

Abandoned?

I discovered in the News pages of MACFORMAT 19 that Apple is to discontinue the LC line. About 18 months ago I was recommended to buy an LC through an Apple Authorised Dealer – the price, £800 for an LC with 14-inch Trinitron monitor. After this substantial investment, I am now left wondering about the continued availability of accessories, accelerators and, in the future, perhaps, any upgrade to PowerPC?

Geoffrey Runnalls (age 14)
Olney, Bucks.

The news isn't quite as bleak as it seemed: Apple is not discontinuing the LCs, it is just going to call them Performas from now on. The current range includes the Performa 460 (a faster version of the 450, which is the same as an LCIII), the Performa 475 (identical to the LC475) and the 630 (which, um, is the 630), though the last one is being bundled with several different choices of software – check our News report last issue for details. Add-ons for these – and therefore the corresponding LCs – should continue to be available for some time to come. As for upgrades to convert Performas to PowerPC, watch for details in MACFORMAT soon.

The price of chips

Why are Mac games so expensive? They sell for anything from £25 up to £50 for a CD-ROM. Games for other computer formats cost £10 to £20. I have a Performa 400 *[= LCII – Ed]* with 4Mb of RAM and a 40Mb hard disk, so I can't buy memory-eating or massive games either. My favourites are *Hellcats Over the Pacific* (about £35), *Hellcats: Mission Leyte Gulf* (about £25) and *Lemmings* (about £30), but without shareware games like *Maelstrom, Crunch* and others I would have an extremely boring computer.

The Mac is not just a business computer. It is capable of playing great games and I think programmers should take advantage of this.

PS: Can you upgrade from *ClarisWorks 1.0* to *ClarisWorks 3.0*?

Ivor Lewin
Amsterdam, The Netherlands

If you think Mac games are expensive, have you tried buying a Sega or Nintendo cartridge recently? (Er, not that I have. It's just some people I know...) We're reviewing some new budget-price releases in MACFORMAT next month, but do other readers agree that Mac games on the whole are too costly?

As for the upgrade: Claris says yes, you can upgrade from any version for just £49 – and that includes a free copy of Claris Organizer, *which is usually £49 on its own!* ClarisWorks 3.0 *is normally £152. For details, call Claris free in the UK on 0800 929005 (or from overseas, +44 81 756 0101).*

Ask the experts

I have been reading with some astonishment your reviews of children's software in MACFORMAT 19. I think your reviewers could be in danger of misleading buyers. I have a five-and-a-half-year-old son who has a lot of software and he has many friends who come over and enjoy playing with our Mac. In fact, we own all but two of the pieces of children's software reviewed in that issue.

One of my son's favourite programs, *King Arthur's Magic Castle*, was given a dreadful review. How many children did your reviewer, Richard Hill, try this program on? The joust, which he calls 'a thin exercise', is very popular with our young friends. Conversely, *Snoopy* was given a rave review, yet both my son and all his friends have given it very little time. In my opinion it is overtly educational (will appeal to parents!) and boring. Reviews of children's software should test the products on many children and be acutely aware that what appeals to adults often does not appeal to children!

Mrs Anne Bedish
West Molesey, Surrey

Our reviews of 'home education' software always tend to emphasise the educational value of the programs as well as their appeal, because they aim to do more than just entertain. But disagreement and feedback from actual users are always welcome – and that applies to any of our reviews.

It doesn't work!

Woe is me. Here I am, subscribing to your excellent magazine, looking forward to it with baited wotsit every month, and this month, *Rebel Assault*! 'Great,' thinks I, 'I'll give it a shot.' But no! It doesn't bleedin' work!

A BIT MORE THAN COPS AND ROBBERS...

I accept that not many subscribers to MACFORMAT are nine-year-olds like my son. Nevertheless, I think it is appalling that the game you have chosen to give free *[in demo form]* on your cover disk with issue 19 is based on Nazis. I also object to your using the word 'bloody' as in 'bloody levels', and the glee with which violence is described – for example: 'Hurrah! Lots of ammo with which to shoot lots of people.' I accept that for years small boys, and young adults, have played cops and robbers. But many computer games are grotesquely violent and then to give one away free where the imagery is based on Nazis is quite unspeakable.

Wolfenstein 3D: violent, yes – but does it promote violence and use offensive images?

I could say pompously that many of your readers' ancestors were killed by Nazis, but then you would think, 'Oh well, that's a special case.' But this would be wrong. Six million people were killed by Nazis and very few of their descendants will have the misfortune to come across this game, with its appalling sound effects and the enjoyment with which it promotes violence. However, just because most Nazi victims will be lucky enough not to know about *Wolfenstein 3D* does not mean that the rest of us should not complain on their behalf.

I do ask you not to support games like this by giving them away free or by promoting them in your magazine. And please don't write back and say 'consumer demand'. Millions of people did not give their lives, or lose them in the gas chambers, to have their torturers immortalised in these disgusting games. There are computer games that are just as much fun and do not use the imagery of Nazi torturers.

Nicola Beauman
London NW3

Thank you for your powerfully-put arguments. I'm not sure Wolfenstein *could be said to glorify Nazism in any way – if anything, it relies on the player unhesitatingly equating 'Nazi' with 'bad guy'. But perhaps that is too glib and insensitive. What do other readers think – about that and about the issue of violence? (Our ironic comment about shooting people was intended to raise precisely that...)*

Having trouble getting *Rebel Assault* to run? Me, I have trouble getting through Level 1...

If software developers want us to spend our hard-earned (or borrowed, stolen or leeched) cash on their products, they have to get it right. Software guarantees are pretty much useless, amounting to 'Tough – you opened the box. Twit.' So letting us play before we pay is a good idea, right? Right.

Wrong. How can you play a game when the required stuff just ain't there? It's symptomatic of the (commercial, not shareware) software industry today that we, the people, have to put up with buggy trash, and that's just if it works.

Maybe it's MACFORMAT (Heaven forfend), maybe it's the developers, but it isn't good enough. Come on, let's all play together on this pitch. We pay you (the developers, Microsoft, whoever), you give us what we want and pay for. Too much to ask? Looks like it.

Steve Marsh
Stirling (via CIX)

The demo of Rebel Assault *on MACFORMAT 18's covermounted CD-ROM, as supplied to us by LucasArts, uses a rather... um, distinctive form of copy-protection: the demo will only work off a CD, using Apple's standard CD-ROM driver software. It won't work if you copy it to a hard disk (hence, less piracy), but it also won't work if you have a CD drive from another manufacturer or you're running a non-standard driver such as* CD-ROM Toolkit. *All we have in the MACFORMAT office are Apple drives, but as soon as we learned of the problem we sought out a way around it. The* Rebel Assault *demo on the CD on the following issue, MACFORMAT 19, should work fine with any drive. Sorry for the hassle.*

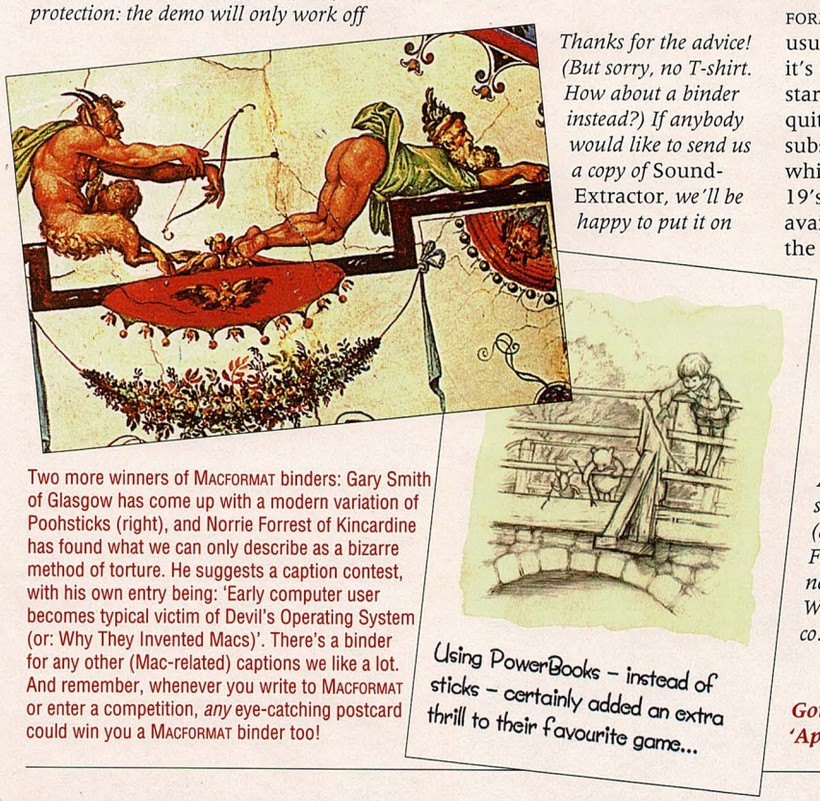
Sound advice

A little tip for a big T-shirt (maybe!). Recently some readers have written about problems using .WAV-format sounds on a Mac. It is easy to convert (and use) sounds from *Windows* with the filename extension .WAV.

First of all, load the sounds you want to convert on your Mac using a PC disk and a utility like *DOS Mounter* or *PC/Mac Exchange*. Then use the shareware utility *SoundExtractor* by Alberto Ricci (his address is Alberto Ricci, Corso De Gasperi 45, 10129 Torino, Italy). When you open one of those .WAV sounds, *SoundExtractor* says it can't find a resource fork and asks you if you want to look for sounds in the data fork. Press the **OK** button. After this, you are asked for a sampling rate for the sound. Here, 11KHz is a good choice. *SoundExtractor* will then create a System sound you can use like any other!

Anfossi Gérald
Nice, France

Thanks for the advice! (But sorry, no T-shirt. How about a binder instead?) If anybody would like to send us a copy of Sound-Extractor, *we'll be happy to put it on our covermounted CD-ROM for everyone to try. The same goes if you have any favourite shareware or freeware you'd like to share – or anything you've written yourself. Pop it on a disk and address it to 'The Disk Editor,* MACFORMAT *' or e-Mail it to us. Our addresses are listed in the 'Get in Touch' box to the right.*



Two more winners of MACFORMAT binders: Gary Smith of Glasgow has come up with a modern variation of Poohsticks (right), and Norrie Forrest of Kincardine has found what we can only describe as a bizarre method of torture. He suggests a caption contest, with his own entry being: 'Early computer user becomes typical victim of Devil's Operating System (or: Why They Invented Macs)'. There's a binder for any other (Mac-related) captions we like a lot. And remember, whenever you write to MACFORMAT or enter a competition, *any* eye-catching postcard could win you a MACFORMAT binder too!

Quick brown Mac

You asked for Mac-related 'typing exercises' to replace 'The quick brown fox'. How about these?

Lovejoy's prized antique Mac weighs OK for box. Or:

By Jove, we fluked Macintosh Grand Prix Quiz.

Tom Connor
Glasgow

Nah, too many I's.

Joke Mac?

My simple missive is dedicated to all those unfortunates who bought the 'here today, obsolete yesterday' vx/vi models.

Why piqued Zulus exchange joke Mac vx for bat.

Let's hope your T-shirts last longer than the Centris/Quadra 660AV 'computing revolution'!

John H Richards
Basel, Switzerland

Sorry, too many U's. You'll have to settle for a binder instead!

In the 'Net

It takes quite a while for each MACFORMAT to arrive in Australia – usually more than a month after it's come out in the UK. For us starving students, a subscription is quite expensive. I do, however, subscribe to *Inside Mac Games*, which you featured on MACFORMAT 19's cover CD, but is normally available in electronic format over the 'Net. Is there any thought of having MACFORMAT in electronic format anytime in the future?

Saeros
Australia, via AppleLink

For a moment I thought we'd get through this page without a token Australian... But yes, you can find selected features from MACFORMAT (and other fine magazines from Future Publishing) on-line, right now! Just point your World Wide Web server at http://www.futurenet.co.uk/computing/macformat.html!

Alex Summersby

Got something to say? Write to 'Apple Talk' at the addresses to the

GET IN TOUCH

Got something to get off your chest or share with fellow Mac enthusiasts? Send your letters to 'Apple Talk', MACFORMAT, 30 Monmouth Street, Bath BA1 2BW. (The shorter they are, the better their chance of being printed.)

- Got something a bit more detailed to say? Write to our 'Soapbox' section – see page 124 – or send us your thoughts on disk (in ASCII format please, so everybody can read 'em), addressed to 'Readers' Corner', and we'll put 'em on our covermounted CD-ROM (provided they're not obscene or defamatory, that is). Be sure to add your name and address on the disk, and please note that we can't return your disk afterwards.
- Faxes are welcome; the number is 01225 446019. Please be sure to write 'MACFORMAT' prominently at the top so that the receptionists know which of Future Publishing's 32 magazines it's for.
- If you have a modem and know your way around this comms stuff, you can also send us letters by e-Mail. Our address is: macformat@cix.compulink.co.uk
The editor personally reads all your letters, but if you want to send e-Mail to him directly the alternative address is: alexs@futurenet.co.uk
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- All correspondence will get read and will be dealt with to the best of our ability. Please understand, though, that we can't manage personal replies, whether by telephone, mail, fax or even e-Mail – it's all we can manage to get the magazine out every month!
- If you have a problem with one of MACFORMAT's covermounted CD-ROMs or floppy disks, please do not return it to the editorial address. The addresses for problem disks and CDs are on the disk pages – this month, page 8.

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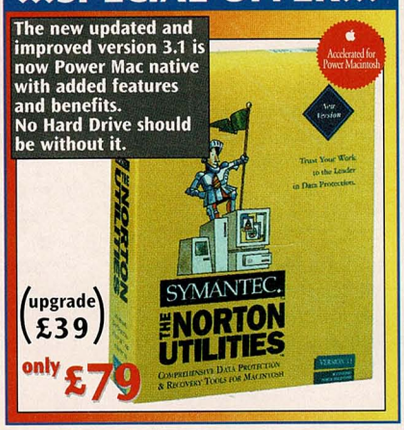
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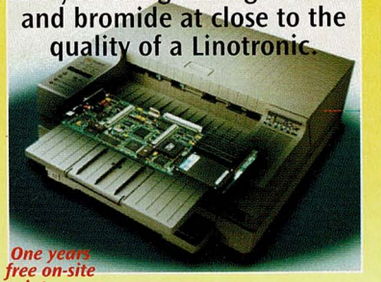

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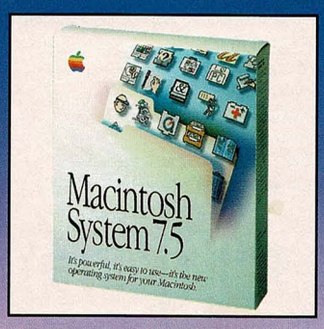

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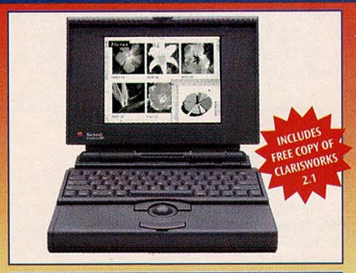

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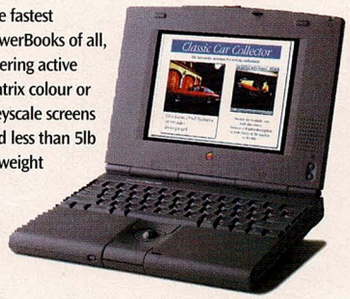

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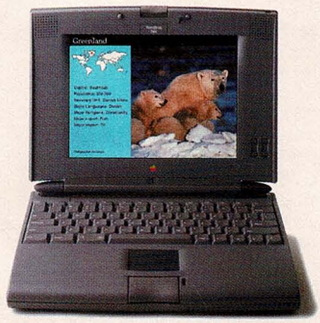

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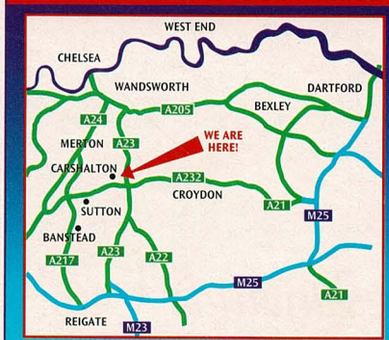

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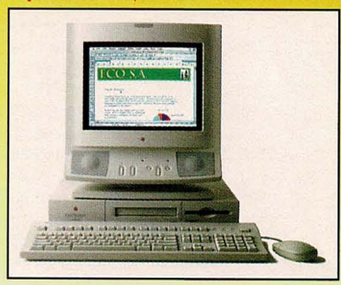

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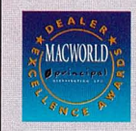

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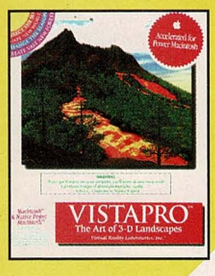

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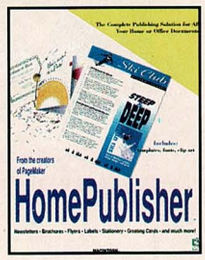

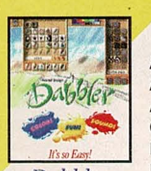

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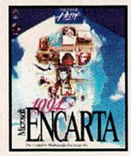

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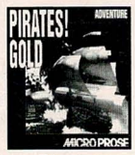

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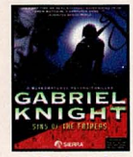

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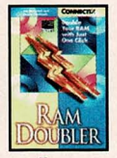

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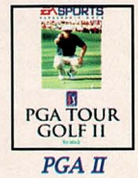

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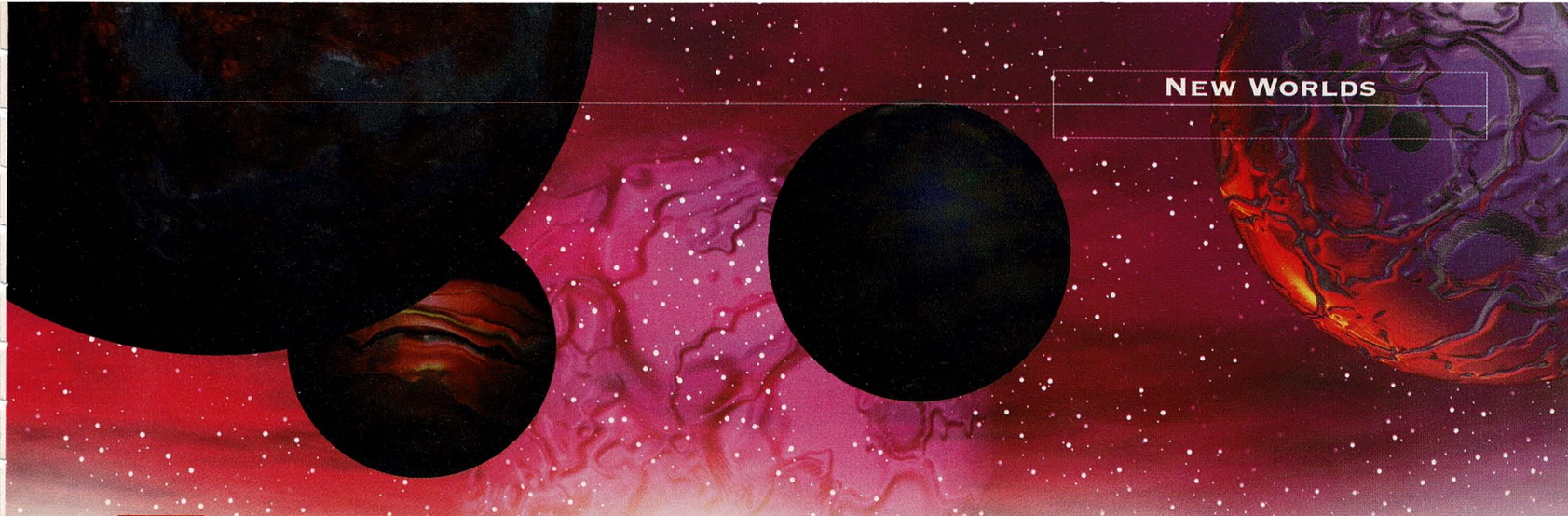


Explore strange new worlds...

Some people never tire of travel. Some don't get the chance to get out much. Others experience distant and exotic places through the medium of their Macs. Some people, as the saying goes, see things that never were; others create them on their own computer screens.

Some people try to imagine what a building or a design is going to look like; others can not only view it on-screen but even 'walk around' inside it or examine it from all angles as if it had already been constructed.

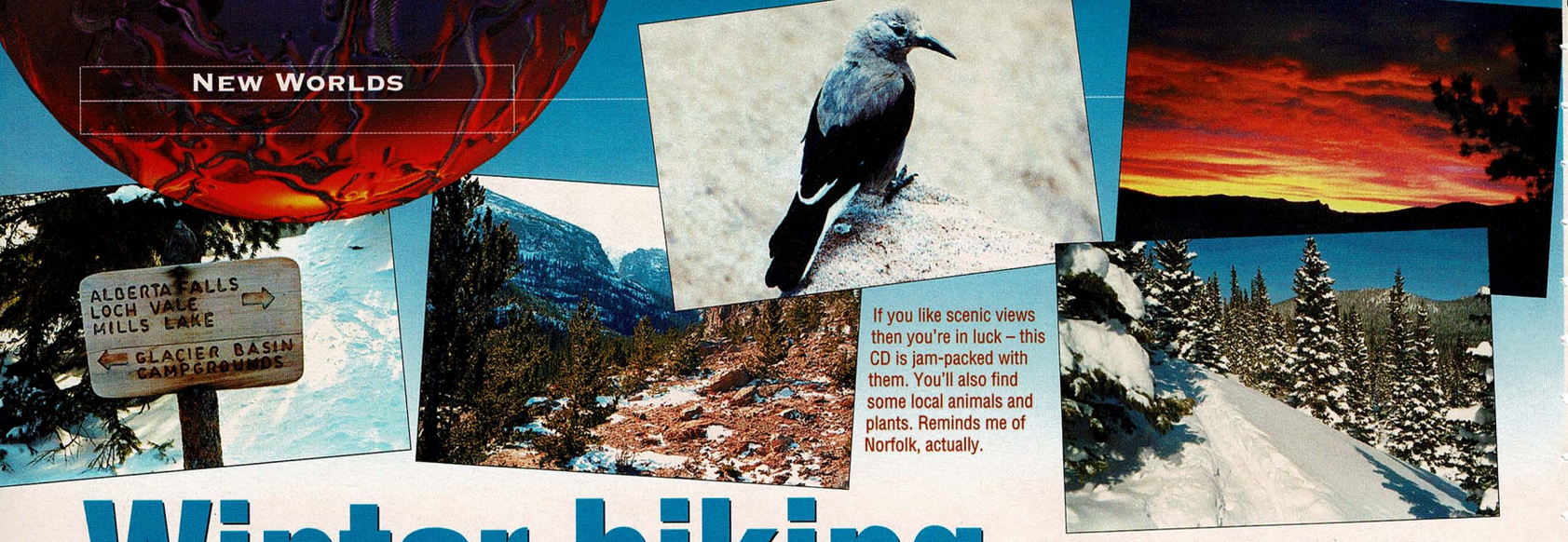
And you thought your Mac was just a glorified typewriter.

Join us as, over the next ten pages, MACFORMAT opens the doors into the strange new worlds you can experience through your Mac. On page 44 you can sample the 'travel' and natural history titles now available on CD-ROM that give you a taste of far-away places and cultures. The best of them put all kinds of information at your fingertips as well, telling you more than the best tour guide could find time to mention and making it more intelligible than the best guide book. You can visit *China: Home of the Dragon* with New Media Schoolhouse, or hop aboard *London: the Multimedia Tour* from MDI. You can browse through the *3D Atlas* produced by Electronic Arts, or *Voyage through the Solar System* with Compton's. The range of such titles is growing all the time, and we'll be looking at others in MACFORMAT as they come out.

Some people see things that never were; others create them on their computer screens.

But that's not all. You needn't be restricted to pre-recorded views, or even limited to real places. Starting on page 46 this issue you can also discover the Mac's astonishing landscape-generating programs, *KPT Bryce* and *Vistapro*, which enable you to create and render imaginary worlds as well as real scenes. We show you how these are being put to practical use – and they could be handy for architects who need to visualise a finished construction in a real context, for designers and artists who want backgrounds or exotic scenes, for adverts or games or just for fun. *KPT Bryce* declares that it 'blurs the line between practicality and playfulness', and at just £150 it's got more to keep you playing than many games!

To round it all off, on page 50 we look back at the Computer Aided Design and '3D walkthrough' programs that are probably the more conventional face of world-building, and then on page 52 we look forward to the developments just around the corner, which promise Virtual Reality on your Mac (with or without the familiar headset). So take a deep breath and join us for the voyage of several lifetimes...



If you like scenic views then you're in luck – this CD is jam-packed with them. You'll also find some local animals and plants. Reminds me of Norfolk, actually.

Winter hiking

Rugged outdoorsman Derek Smith swaps his boots and backpack for a mouse and goes for a winter ramble in the Rocky Mountains...

Winter Hiking in Rocky Mountains National Park transports you to the North American Rockies. The creators claim you'll actually feel as if you're hiking through the beautiful landscape. But the matter of whether you'd actually *want* to be stuck up an isolated snow-covered mountain, with frozen fingers, toes, nose etc, is not altogether addressed.

The program's concept and execution are quite simple. The creators sent some poor photographer out in the middle of winter to walk a series of scenic trails. At intervals of 100 feet or so he stopped and took four photographs, one in each of the four compass directions. All these pictures were then scanned on to a CD at full 14-inch screen size, mostly in 256 colours.

There's a demo of Winter Hiking on this month's CD-ROM

So instead of snow shoes, all you need to journey along these trails is a mouse. Clicking at the top of the screen takes you forward. Clicking at the bottom of the screen turns you around to see were you have just been. And clicking at the left- or right-hand edges turns you around to see side views. It really does give you a feeling of wandering along foreign trails. It's just a pity you can't watch the wildlife in the traditional American manner – through the cross-hairs of a high powered hunting rifle...

Optional accompanying piano music creates

Australian Walkabout 2

Alex 'Crocodile' Summersby puts on his corked hat and goes walkabout, but can he find his way?

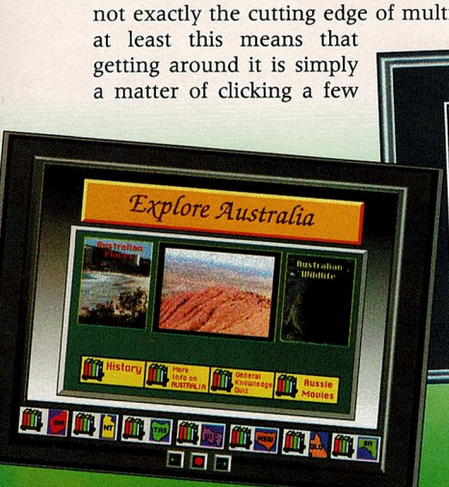
G'day. If you've never been Down Under and want to see what it's like, or if you have been and need reminding, take a dekko at this. *Bob Libby's Australian Walkabout 2* is chokka with over 50 *QuickTime* movies of Australian scenes and wildlife, sound clips and at least a thousand stills – more than 500Mb, all up.

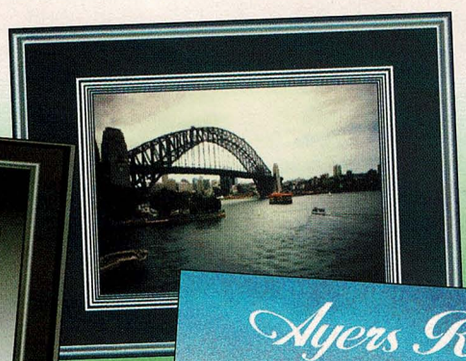
Australian Walkabout is *HyperCard*-based and not exactly the cutting edge of multimedia, but at least this means that getting around it is simply a matter of clicking a few buttons. Only problem is, there's no consistent design to the various screens, so you flit around like a blue-arsed fly looking for the right place to click. From most sections of the CD, for example, you can return to the main screen by clicking on a small map of Australia – only it turns up in different spots and is sometimes colour, sometimes black and white.

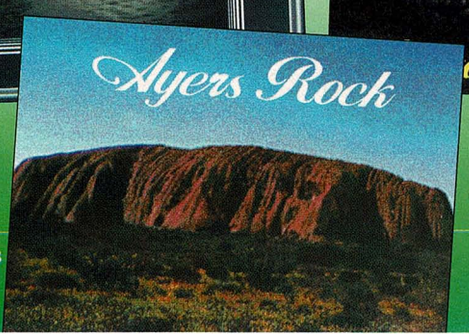
If you just want to go walkabout, no worries – there's so much to explore. And for the ankle-biters, there's more educational resources than ants at a bush picnic – pop-up text descriptions and history sections, a range of lesson plans for teachers, and even 500 'Stencils' of screens that you can print out for the littlies to colour in themselves.

If you're searching for something specific, on the other hand, you need to be as game as Ned Kelly. There is no index or search function, so if you want to check out the Sydney Harbour Bridge, for instance, you're in for some hard yakka. Say you know it's in New South Wales. Go to the NSW screen and select **Photo** – you get scenes of Sydney, but not the Bridge, or the rest of the State, for that matter...

You have to go to 'Australian Scenes', *then* NSW, then use the arrow buttons to cycle through all the sights back o' the Black Stump until you finally get to the big smoke. A small button in the corner offers you a slide-show of 'Sydney scenes' or –

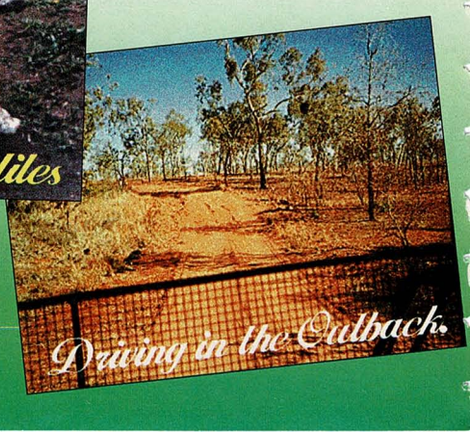


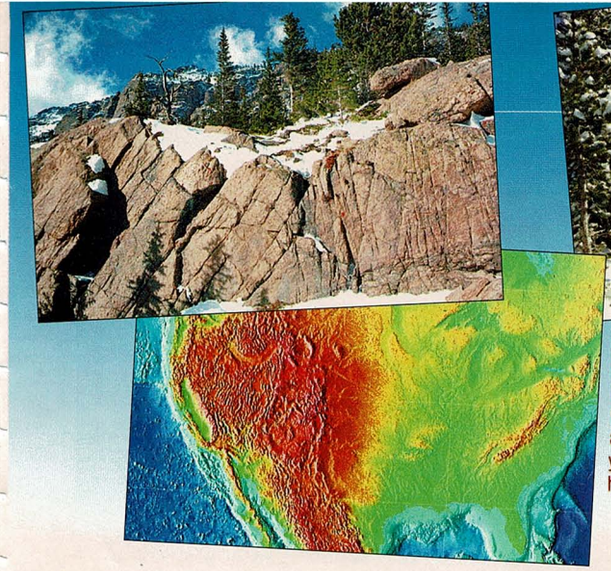


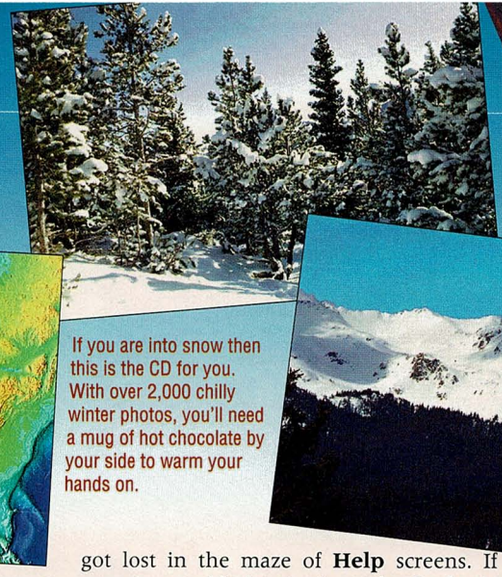


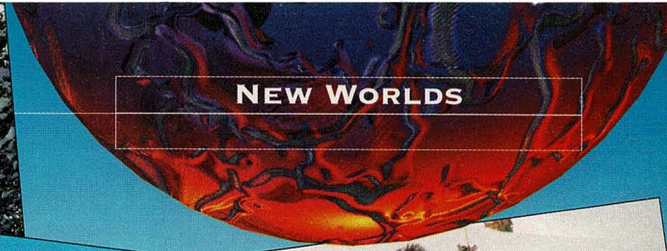
alian Crocodiles

An old Aussie saying goes: 'never smile at a crocodile.' The inset *QuickTime* clip explains exactly why...









If you are into snow then this is the CD for you. With over 2,000 chilly winter photos, you'll need a mug of hot chocolate by your side to warm your hands on.

a relaxing atmosphere, although it does become repetitive after a while. There are approximately 500 locations on these trails, giving you over 2,000 pictures. That should keep you occupied for a long time, especially as you will want to revisit favourite places to see frozen lakes, wild deer and awesome views.

There are additional features to keep you interested as you walk around. Some locations allow panoramic views – you can simulate standing on the spot and moving your head from left to right in a 180° turn. You can zoom in on items of interest such as trees and rock outcrops for detailed views. There's plenty of text to describe and explain the areas, plus some audio descriptions in an acceptable American accent.

Winter Hiking is great way of exploration for anyone without a sense of direction, like me. I got lost in the maze of **Help** screens. If you are considering a trip to the Rocky Mountains then this is a must. Even as a form of entertainment for armchair expeditionists this program can hold its head up and be proud of its gentle, informative slant.

Another reason for purchasing this package is the relaxed attitude that the publishers have about the pictures on the CD-ROM. You are allowed to copy and use them for whatever purposes you wish.

From a technical point of view this is a very basic piece of multimedia. Some people have commented that it's just a tarted up slide-show. Well, yes, but its innocence is appealing. The lack of graphical wizardry is made up for by the genuine affection that the creators obviously had for their project. It's only available from the US, but if you phone the number to the right you can order by credit card. *Derek Smith*

WINTER HIKING

Price: $49 (inc P&P) Out: now
Requires: 14-inch colour monitor, LCII or better, CD-ROM drive
For more details contact Rocky Mountain Digital Peaks on 0101 303 258 3779

Features 70%
Loads of pictures, few options.

Ease of use 75%
Confusing range of controls, but OK after some use.

Value for money 80%
It will take a long time to explore the whole CD.

MACFORMAT RATING 81%

strewth! – the Harbour Bridge! I mean, fair crack of the whip! And if you want to move back just one screen from a slide-show to the option screen you selected it from, forget it. You've got Buckley's chance.

But if you're keen on particularly obscure Australian country-and-western songs (much like country-and-western anywhere else, but with an Aussie accent), this CD is a beaut – you cop an earful of 'em whenever you run many of the slide-shows. And there's some very '70s synthesised-xylophone muzak when you view the *QuickTime* movies. I couldn't find more conventional tunes such as the national anthem, or even 'Waltzing Matilda', anywhere. (It's hard to find any sign of Canberra, The Nation's Capital, either, but I won't complain too much about that. I reckon that it's about time we lost the bloody politicians anyway.)

Considering its rich range of resources, this CD is reasonable value for money at US$70. That amount won't exactly cover the airfare, but Blind Freddy could see that *Australian Walkabout* is no substitute for being there. This is more like going round to your neighbours' house and sitting through their postcards (complete with captions in a nice script font), holiday snaps (many out of focus), slide-shows and grainy home movies showing in a two-inch-square window. Though there's plenty there all right, and though the images and sounds are richly evocative, they just don't capture the grandeur of the Island Continent. And that's fair dinkum. *Alex 'Bruce' Summersby*

WALKABOUT 2

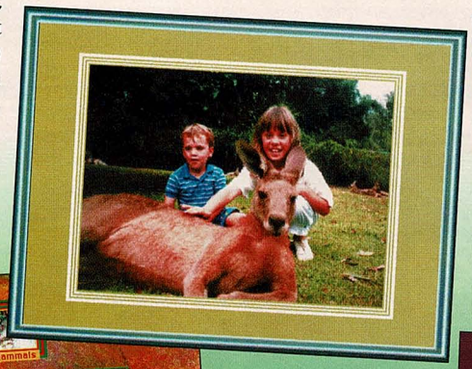
Price: US$69.95 or Aus$89.95 (plus P&P).
Out: now.
Requires: any Mac, at least a 13-inch colour monitor, 5Mb of RAM, a CD-ROM drive and *QuickTime*.
For more details contact Enville Holdings, Sydney, on 010 61 2 451 6765 (fax 416 2836).

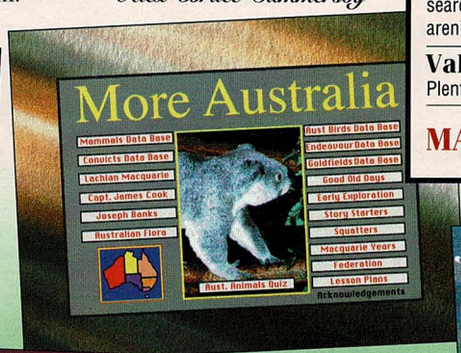
Features 81%
Full as a bush pub in a heatwave, but a couple of baskets short of a picnic. Where's Canberra? Where's Waltzing Matilda?

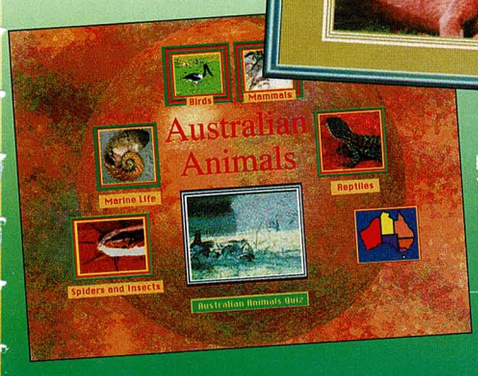
Ease of use 68%
Point and click, but there's no index or search and even the 'next screen' buttons aren't in the same place.

Value for money 80%
Plenty of pics for the price.

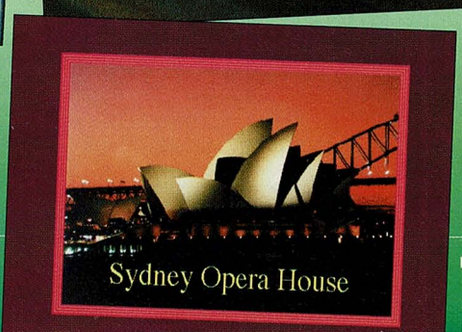
MACFORMAT RATING 76%

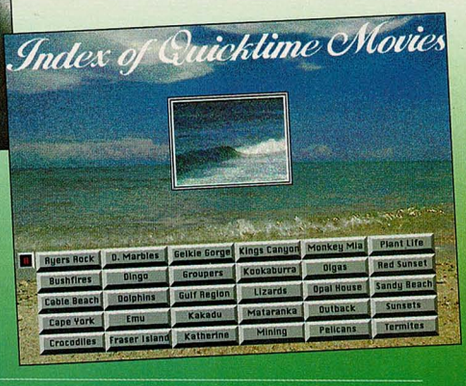


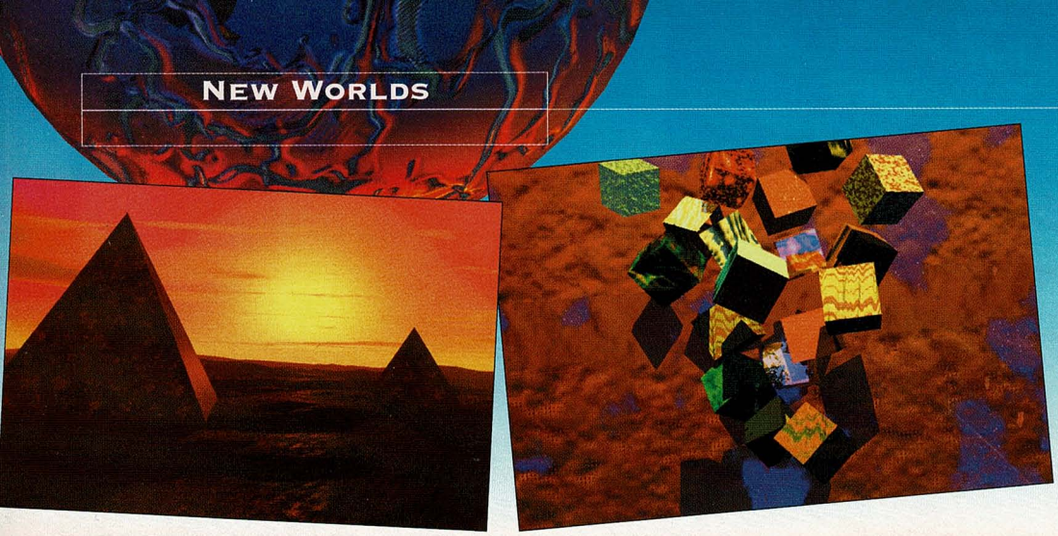




It's not all picture postcards. You too can sample the fun of grainy little *QuickTime* movies of the view from the top of Ayer's Rock...







KPT Bryce 1.0

Ever dreamed of designing stunning lunar landscapes, with glowing orbs and marmalade skies? Now you can. Derek Smith looks at the cutting edge of virtual unreality.

Like artists, landscape generators can mimic reality or go one step further. *Vistapro* (see page 49) is excellent at simulating the real world. *KPT Bryce* picks up where *Vistapro* leaves off, creating a much greater variety of images with a far wider range of tools. If *Vistapro* produces paintings in the style of Constable, *Bryce* produces techno-art.

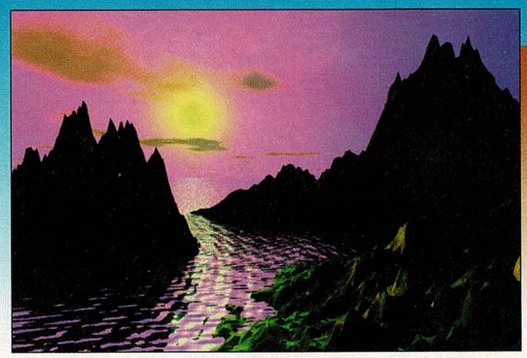
Splash a snow covered landscape across the screen, embed a glowing red orb into the soil, create an eerie yellow sun low in the east and finish your artwork off with a low green fog sliding across this distant world. You're painting with clouds, colouring with the sun and conjuring with shadows.

Each picture is made up of three basic elements. The first is ground – you know, the stuff that exists under Tarmac. You don't actually need to have ground, particularly if you are creating an artistic picture rather than a landscape. For instance, if you want to create a moon floating in space then a grassy meadow rolling across the bottom of the screen would be just about as welcome as a hot and horny porcupine in a sauna.

The next thing that you will usually want is terrain. This is a three dimensional structure consisting of mountains, hills and generally the part of the landscape that sticks up. Greyscale images can also be imported and treated as terrains. For instance, you could write text into a graphics program as white on black and import that as a terrain. The word would now appear as a three dimensional landscape with the letters rising up from the background. You can then play around with this terrain by weathering, smoothing or using a multitude of other effects.

There will usually be a third element to your world: objects. You can have spheres, cubes, pyramids, cylinders and cones (expect to see road works on Saturn). These objects can be stretched, rotated and joined together to make

THE FOUR SEASONS



To show how to alter the same image by adjusting the settings I took a landscape through the four seasons. The spring dawn sees the sun low on the horizon, casting long shadows across the scene. The sun's reflection completes the effect.

Want a closer look at KPT Bryce? It's on this month's CD-ROM

KPT BRYCE VS VISTAPRO

Although both programs create landscapes, they are surprisingly dissimilar beasts. *Vistapro* produces more realistic landscapes by enabling you to create trees, rivers, lakes and snowlines. You can also import data to recreate scenes that exist in real life (see page 49 for more details).

Bryce is less suitable for creating real world images, but excels in high quality futurist landscapes. You have much more control to create a specific desired scene from scratch. It also has advanced graphic techniques, such as basic ray tracing and the facility to map an image on to an object.

One last but important factor is *QuickTime* movies. Whereas *Vistapro CD* comes with a very sophisticated program to create movies by flying across your landscapes, *Bryce* has no animation options. The next version of *Bryce* promises to deliver this, but at the moment it's sadly lacking.

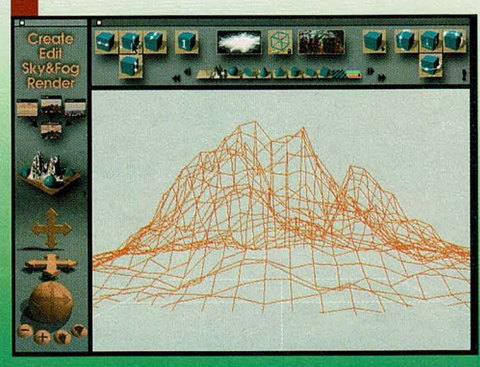
If you want to create scenes that look like Earth, buy *Vistapro*. If you want to create breath-taking art, then buy *KPT Bryce*. If you have lots of money, buy both!

HOW TO CREATE A WORLD IN SIX EASY STEPS

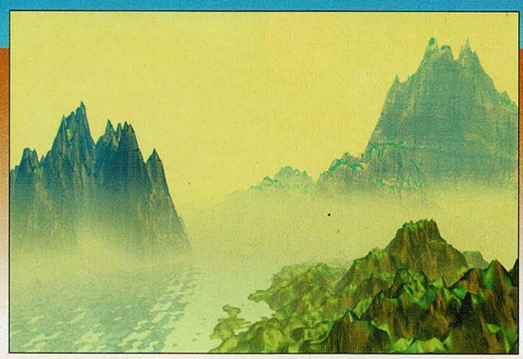
1 When you start a new landscape, you can select the ground, terrain and sky from a predefined list to create instant worlds. However, in this case I'm going to create my own terrain and ground but I will use that sky.

2 To create the ground, I began with a smooth blue surface and increased the Bump Gain to make the surface rippled. Frequency controls how close the bumps are, and increasing reflectiveness makes it look more shiny.

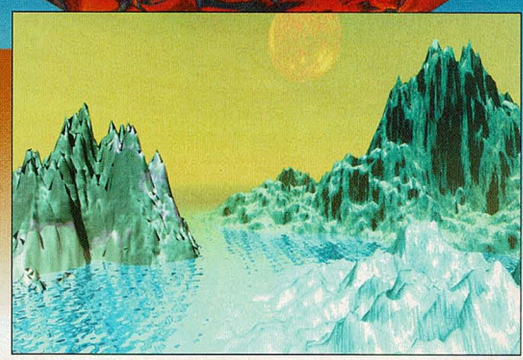
3 The next step is to create a terrain. Here I enlarged the whole thing and increased the height to make it more mountainous. Click on the terrain and drag the mouse down, and it descends below the water line.



To achieve the summer image, the sun is placed high in the sky to give a very bright daylight effect, and the haze control is turned down to give a summery blue sky. The cloud setting scatters the sky with a few puffy clouds.



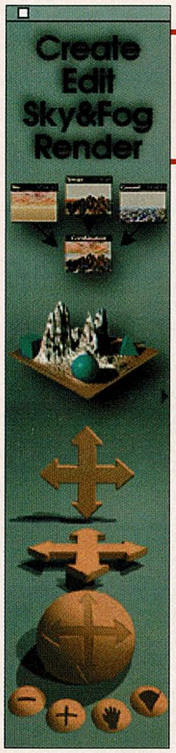
Come autumn and the mist setting is increased to obscure the horizon. The fog control enables you to not only increase the amount of fog, but also set how high it goes. Here I have the fog set fairly low so that it hangs over the water.



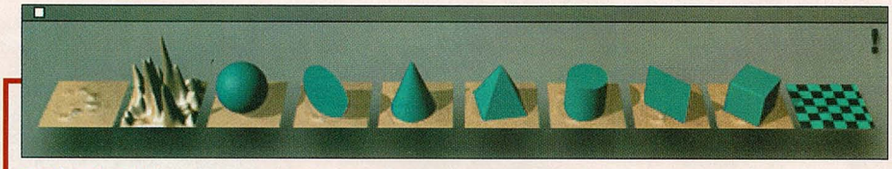
With winter comes snow. To get this view, I changed the materials that the landscape is made out of, so it's mainly white. This makes the water glisten brightly, and the air is made clear by turning down the mist and fog settings.

TAKE CONTROL OF YOUR NEW WORLD

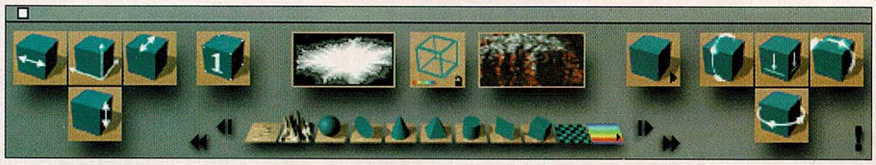
Clicking on one of the four titles at the top of **the Master palette** brings up the appropriate control panel below.



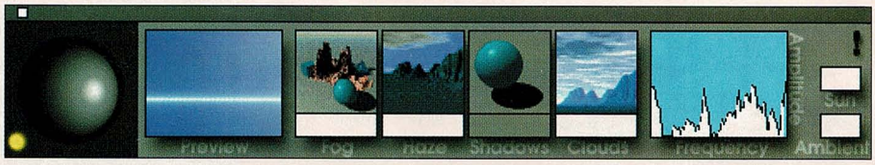
The Master palette gives access to the other controls and enables you to alter the viewing angle, zoom in and out, or move up and down.



The Create palette enables you to create grounds, terrains, and a multitude of three dimensional objects.



The Edit palette enables you to change the size of an object and rotate it. You can also apply surface textures.



The Sky & Fog palette gives you complete control over fog, haze, clouds, and the position of the sun.

The Render palette enables you to control the size of render, shadows, as well as creating masks for *Photoshop*.

an extensive range of shapes.

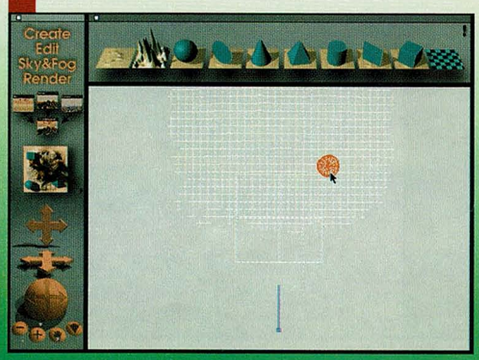
All of these three basic elements can be textured, and this is where much of the power of the program lies. Create a cube, apply a slightly bumpy but regular surface, colour it white and, hey presto, you have a huge sugar lump floating in the sky. There are a large number of predefined textures to choose from, or you can create your own from scratch.

Apart from being very powerful, this is the most confusing part of the program – there are an overwhelming number of options. Some of these are highly technical and there seem to be some odd quirks which are not explained well in the manual. But with time and effort you'll learn to master this screen. And it is well worth it.

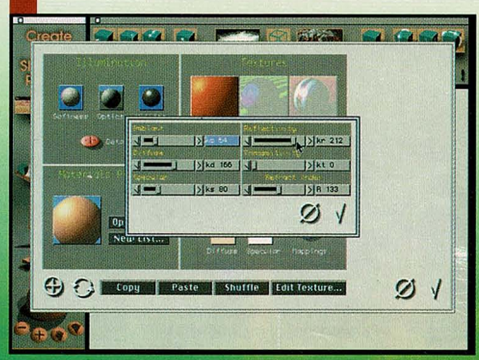
One of the more advanced options in the textures screen is the reflectivity control. With this you can make any object reflect more or less light. Applied to a sphere and turned full up, it gives the appearance of a smooth metal ball. Applied to water, it can make the surface dull, sparkle or even look like mercury.

For advanced effects you can map two-dimensional images on

4 I want a sphere embedded in the mountain, so having created one I position it using the mouse. You can view your landscape from several angles to help accuracy. The blue line shows the view that'll be rendered.



5 This is one of the confusing screens and takes a while to master. I'm increasing the reflectivity quite a lot to make it appear metallic. 'Specular' helps to make it appear glossy, while the 'Ambient' gives it some colour.



6 Click Render and wait for half an hour to see the final effect. The water's worked well, it reflects both the red mountain and the sphere. The sky and ground, unlike terrain, are infinite in size and so meet at the horizon.

to three dimensional surfaces. For instance, if you have a scanned photo of your face, this could be applied to a sphere so that your face wraps around it.

The manual is quite helpful and is written in a fairly chatty manner, although this light-heartedness trails off as you progress, and the manual becomes more complex. Mind you, it isn't too easy to be jocular about the effect of specular diffusion. My main criticism of the manual (as with *Vistapro's*) is the almost complete lack of colour. A few more step-by-step tutorials would have been rather nice too, but at least there are plenty of tips and hints.

There is only one thing that will hold you back when using *Bryce*, and that's your imagination. But there is even help here, in the form of an accompanying CD. This is jam-packed with goodies, including hundreds of sample images. Just when you think you're getting the hang of this program, you look at these sample images and think, 'How did they do that?' This drives you on to experiment and discover new techniques.

This is where the real value of this product lies. Even when you have spent a hundred hours using *Bryce* you will still discover new things. Lying in bed you suddenly wonder what would happen if you rendered (drew) a picture from inside an object, or underwater.

And now for the catch: *Bryce* requires a powerful machine to run on. I mean really powerful. OK, so the box says you can run it on an LCII. But then again you can tow a caravan with a Mini... To get the best out of the program you will need an LC475 or better, with at least 8Mb of RAM (preferably 16Mb) and a monitor that can display thousands or millions of colours. A PowerMac version is promised very soon, which is just as well because *Bryce* suffers badly under emulation, maybe because of the fact that PowerMacs don't have a maths co-processor. I tested the beta version of the native software and it is incredibly fast.

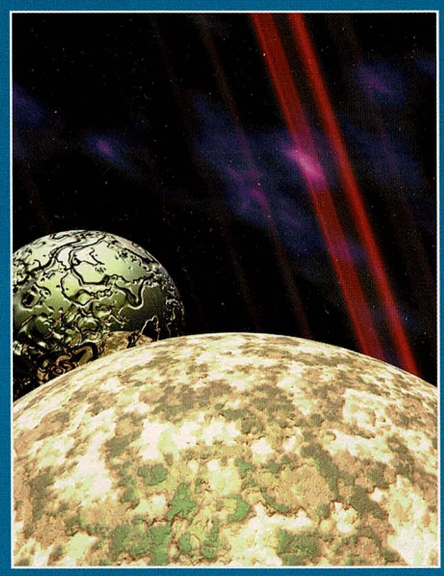
Finding a practical use for *Bryce* is a little tricky. If you produce graphics for a living then this is a crucial addition to the range of graphic programs already out there. If you're not a graphic artist, buy *Bryce* first and then worry about what it's for. You'll have hundreds of hours of pure fun working it out. *Derek Smith*

KPT Bryce 1.0

Price: £151.50. Out: now
Requires: LCII or better, 4Mb of free RAM, System 7 or later.
For more details contact Principal on 0706 832000.

Features Great flexibility but no animation.	90%
Ease of use Bizarre but likeable interface.	86%
Documentation Friendly, but colour would have been nice.	85%
Value for money Given the sophistication it's very good.	94%
MACFORMAT RATING	91%

Cover Image

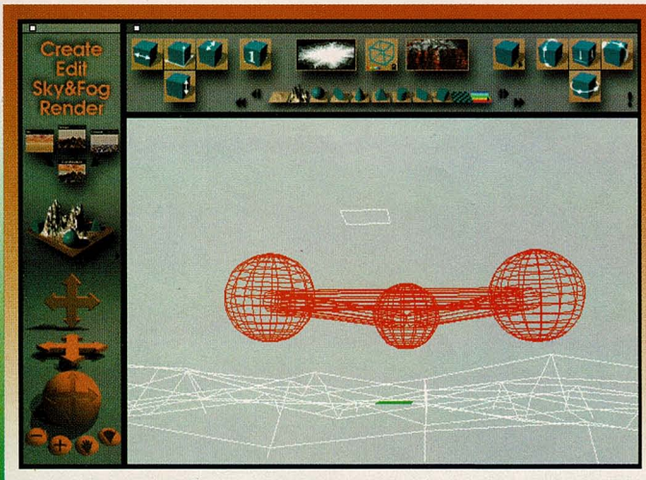


When we decided to put a *KPT Bryce* creation on the front cover we spent ages trying to get just the right image. Moving this mountain left a bit, making the sea just the right shade of purple and increasing the reflection of the floating cube.

After a long time we decided that it just wasn't working, so we played around with other ideas. First we choose a very nice space sky from a pre-created list. Then we created a sphere, enlarged it and choose a nice bumpy texture from a list of materials. The next step was to create a second sphere, put it behind the first and give it a shiny surface.

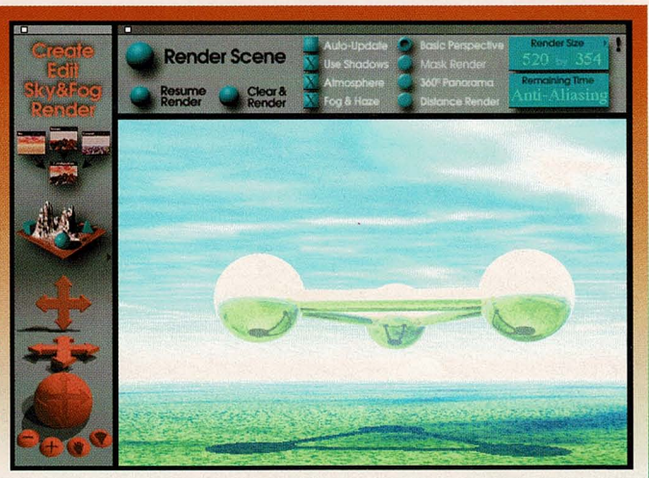
A few small alterations and we had our image. The whole process took no longer than 15 minutes. With *Bryce* you can create incredible images in next to no time. Of course, rendering is a different story. Running on a PowerMac 8100 it still took several hours to draw.

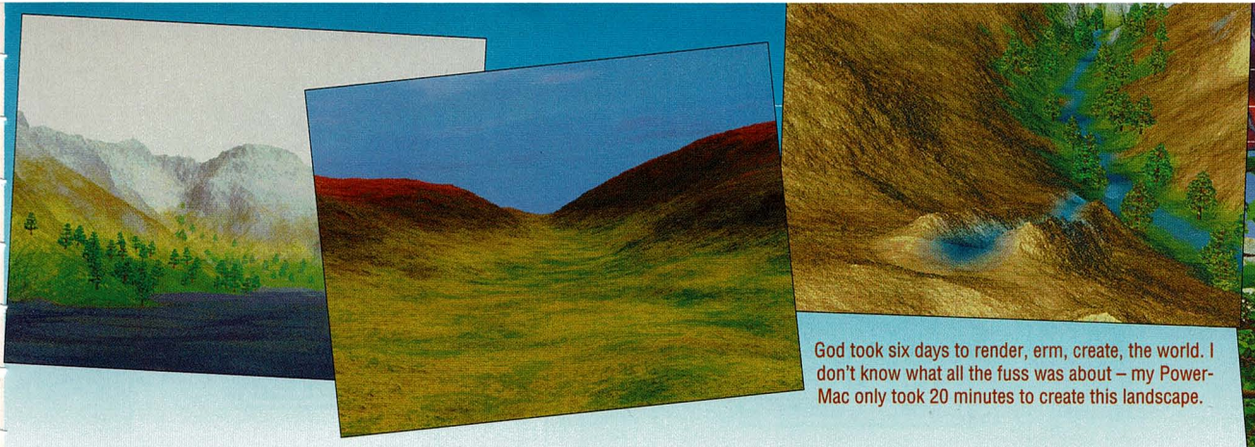
The final task was to alter the colouring using *Photoshop*. Colour manipulation is clumsy within *Bryce* and it is better done with a separate program made for that job.



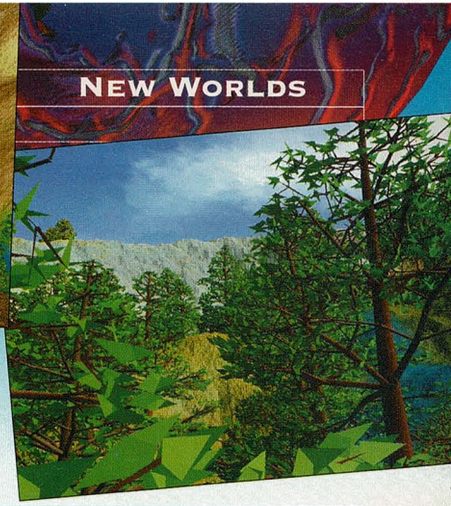
For a product of this price, *KPT Bryce* has some very sophisticated features, such as its ray tracing. Here I have created three tubes, three spheres, and grouped them together to make a single object, and then viewed them from below.

Once it's rendered, you can see how clever the program is. Not only does the surface of the object reflect the grond below, but you can also see the reflection of its own shadow. Although not a complete ray tracing program, it is very good and comparatively fast.





God took six days to render, erm, create, the world. I don't know what all the fuss was about – my Power-Mac only took 20 minutes to create this landscape.

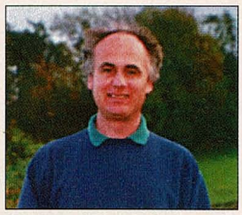


Shaping our future

Create a better environment with *Vistapro* on your Macintosh. Derek Smith finds out how.

Confluence is one of a new breed of companies known as telecottages. It is located in deepest Wales; a lovely environment, but this remoteness can have its price – the fax picks up Radio 4! I finally tracked down the man behind Confluence, Richard Marsh, and asked what use he has found for *Vistapro*.

'I spent ten years as managing director of an environmental consultancy before setting up on my own. Multimedia gives us the opportunity to do some very exciting things in environmental studies, visualisation of projects, for instance, which has traditionally been a rather difficult area.



Richard Marsh produces accurate British landscapes for use in *Vistapro* from his home in Wales.

'When a new motorway was built in Britain, the course was often marked out and people were invited to imagine what it would look like. But they could only guess. What I was looking for was a way of demonstrating this visually through virtual reality or multimedia'.

I asked Richard how he got into selling British landscapes.

'It was a serendipitous encounter with *Vistapro*, reading a magazine one night on the train back from London. It looked great for the States as there were plenty of landscapes available, but there was nothing for the UK.

'The reason is that in America they have this great philosophy that the public still owns things, including all the mapping data in their country. In the UK it's all invested with the Ordnance Survey, and if you want the data, you have to pay a large sum of money for it.'

Selling UK landscapes is not Richard's main aim though. In fact, it's just a fortunate spin-off from his true goals.

'I began producing UK landscapes because I wanted the data for myself, and I thought I might as well sell it on. We now have the ability to fly through landscapes, place accurate 3D objects on them, and add live video and speech.

'We can create extremely exciting visual demonstrations of what environmental projects might look like before they are constructed. There are over 150 planning applications for wind farms in the UK, and people want to know what effect they'll have.'

I asked Richard what he thought this would all lead to in ten years' time.

'At the moment there are lots of areas of natural beauty with restricted access and thousands of pairs of feet are wearing the soil away. In the future, virtual reality may be the only way to experience those sites.

'The industry is just exploring the component parts of multimedia. That's why I called my business Confluence. It's a meeting place of streams into a larger river. That's where multimedia is leading.'

Derek Smith

GREAT BRITISH LANDSCAPES

With *Vistapro* you can place a 'camera' above a digital world and recreate the photo that it would take. The variety of achievable results range from stunningly realistic pictures to bizarre alien worlds.

Many people use *Vistapro* to render (draw) randomly created worlds from the almost infinite variety on offer within the program. But you can also recreate real-world images by using digital landscape data collected by satellites. Purchasing American landscapes on disk isn't too difficult. But the same has not been true for British landscapes – until now.

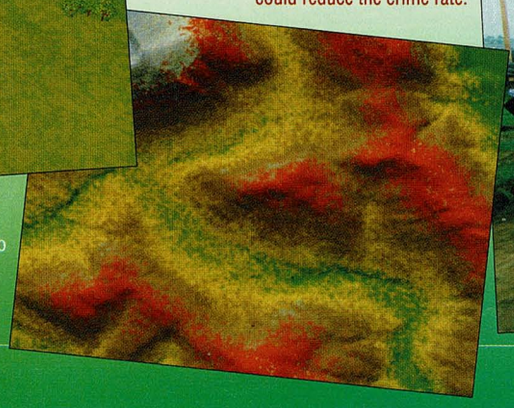
Confluence now produces three sets of landscape data ready to be loaded into *Vistapro* and rendered. These include Snowdonia, featuring Menai Bridge, The Glyders, Anglesey and many other sights; English Lakes, including Windermere, Derwent Water, Ullswater and many other lakes; and British Highlights, including Snowdon, Scafell, Ben Nevis, Cairngorm, Cader, Malham, High Peak and Skye.

Price £41.13 each. £82.25 for all three. For more details contact Confluence on 0938 75266.
Of course, you'll need *Vistapro*, which is £119.95 from Meridian on 081 543 3500.

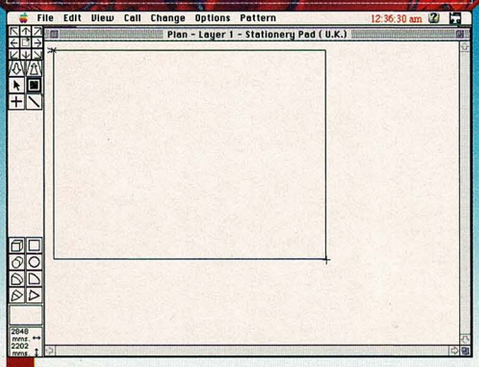
If you already have *Vistapro* and some spare cash, then this is an excellent addition.

MACFORMAT RATING **88%**

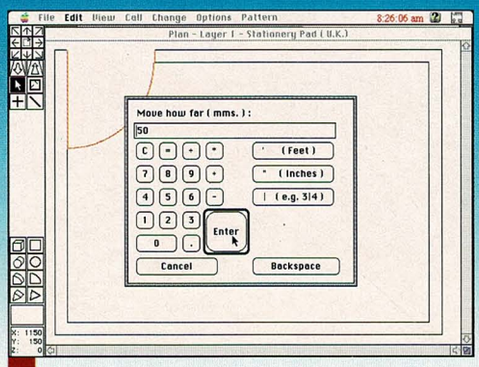
Above is an aerial view of a landscape and to the right a view from a satellite. Richard uses *Vistapro* to produce 3D images like these from maps of actual terrain.



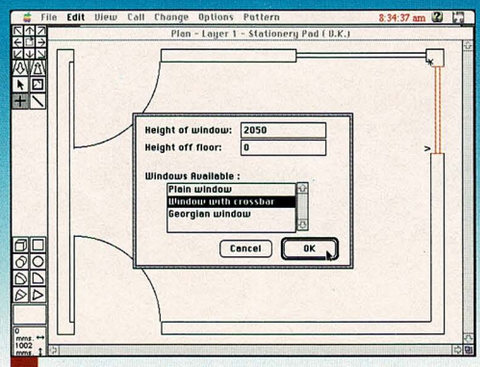
Not all protests are quite as civilised as this. Many 'misunderstandings' could be avoided in the future by the use of multimedia. It's a bizarre concept that a Mac running *Vistapro* could reduce the crime rate.



1 Here's the main screen of *MacInteriors*. The empty box is the work area. The tools at the top-left of the screen move the cursor and create objects like walls and doors, etc. The tools at the bottom-left create more complex objects.



2 Once you've made the initial outline of your world you can start adding features like doors and windows. Use the Horizontal and Vertical Fixture Tool to mark out where you want to place your objects and move them into position.



3 You're not restricted to plain doors and windows; there are different styles available. You can define the style, height and opening direction of a door, and even the way it's hung. Windows, etc are defined in the same way.

MacInteriors

See the home of your dreams materialise before your eyes...

MacInteriors enables you to create a complex 3D world using a simple library of functions and tools. Starting with bare room outlines, you can build up a completely furnished building that contains objects you've designed yourself or ones you've selected from the object library.

Using *MacInteriors* you create your world in a flat, 2D window, and you specify the length and height of basic shapes like windows, doors and walls. A wide variety of viewing options enables you to look at your emerging design from any of the 2D planes: from the front, back, left or right; in a plan view; in multiple views; or in perspective. Using the perspective view enables you to get a good idea of how your design is developing.

Once you have designed the basic layout of

Virtus WalkThrough Pro

Step through the screen of your Mac into virtual worlds that you've created. You can even video your trip. Clive Parker is your guide.

With *Virtus WalkThrough Pro* you can design and build your own personal virtual reality and walk through it. You can even record scenery and save the walk-through as a *QuickTime* movie to play back at a later date.

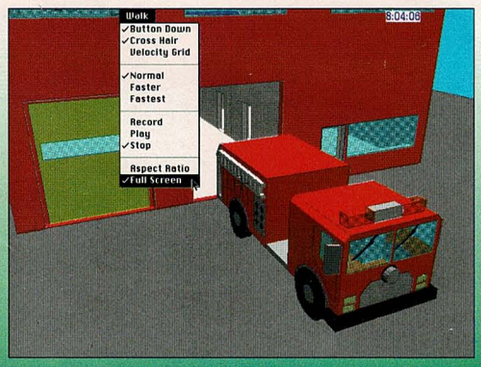
Once you've designed your virtual world and created your tour around it, you can save the movie in several formats using the **Snapshot** command. This enables you to save the walk-through frame-by-frame in a variety of formats including *EPS*, *Illustrator*, *PICT*, *TIFF*, *PICs* and *QuickTime* files.

There are three different kinds of window in *Virtus WalkThrough*, giving you total control over the design of your scene. These are the Tool Palette, the Design View window and the Walk View window. Each Tool Palette has functions specific to the window you are working in; the most complex tools are for the Design View window. Although the tools seem to be very complicated at first, actually using them to create your worlds turns out to be quite simple. In common with all 3D software it looks far more difficult to use than it really is.

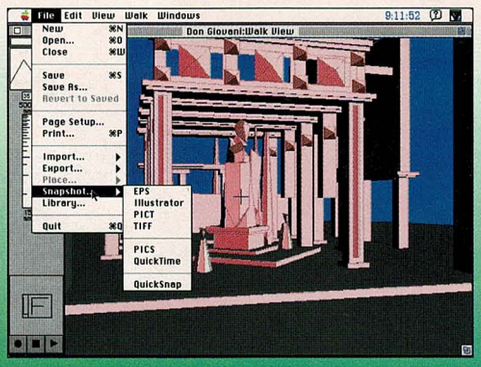
Try Virtus Walk-Through for yourself – there's a demo on this month's CD-ROM

The Tool Palette is normally positioned at the left side of the screen, although you can move it to anywhere you like. There are different Tool Palettes depending on which view or editor is active.

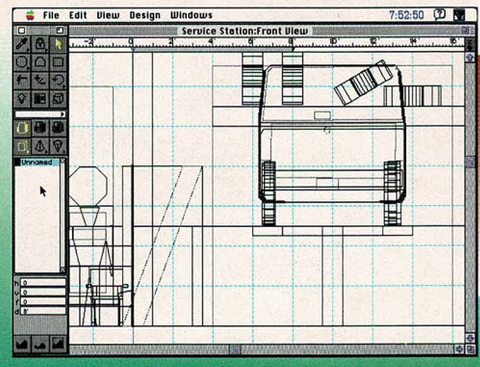
The window where you actually design your scene is the Design Window. This is a 2D plan-view that can be viewed from six directions: top, bottom, front, back, left and right. Different parts of your plans can be designed in different colours, making it simple to keep track of your progress. A comprehensive range of textures enables you to colour your scene to



You can use the **Full Screen** command from the **Walk** menu to get an overall view of your virtual scene.

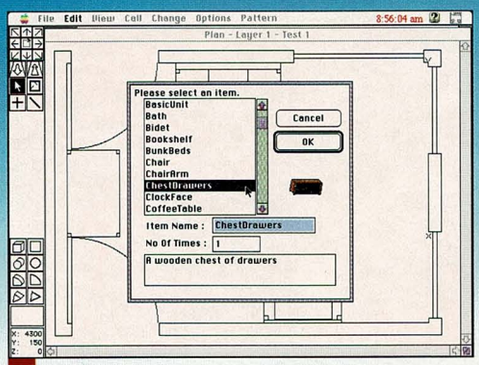


Using the **Snapshot** command you can grab any frame from a walkthrough and save it as part of a *QuickTime* movie.

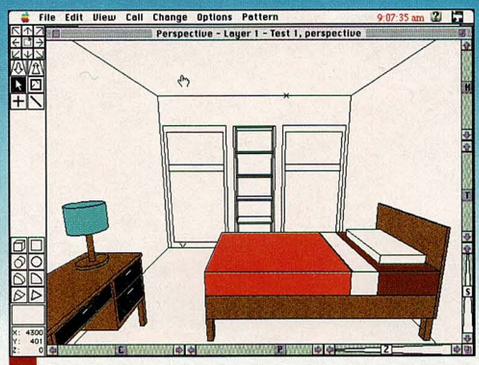


Expand the Design View for greater control over the development of your own private virtual world.

Create your own landscapes and virtual walk-throughs with this month's cover disk programs – see page 7



4 The built-in library is called the Stationery Pad. It contains many household items from a range of Macs and monitors to the kitchen sink. You can select any number of these objects to furnish your world.



5 Here's a view of the room as seen from the left-hand wall as if you were standing in front of the wardrobe. Objects can be placed anywhere within the three dimensions of the room, even on top of other objects.

your fledgling 3D-world you can then start adding furniture from the object library. A reasonably well-stocked library of furnishings is supplied, including objects like desks, four-poster beds, tables, chairs, lamps and even a modest range of Apple Macs.

Getting to grips with the tools in *MacInteriors* is a reasonably quick and easy process. After you have spent several hours experimenting with the program, you'll soon be building quite complex virtual worlds almost intuitively.

The ability to add and remove objects at will in Edit mode is a plus, but the lack of a proper texture tool leaves your finished scenes looking drawn rather than rendered. *MacInteriors* features a pattern tool that enables you to add colours and patterns to objects, but it does leave a little to be desired.

Overall, *MacInteriors* is a very useful tool for creating your own reasonably detailed 3D worlds. However, a few extra functions and features would make the final results look so much more realistic. It's a good program, but it could be better. *Clive Parker*

MACINTERIORS

Price: £104.58. Out: now.
Requires: any Mac with 1Mb of RAM and System 6, or 2Mb of RAM and System 7.
For more details contact Microspot Limited on 01622 687771.

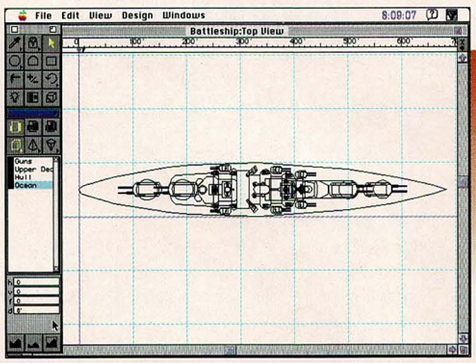
Features 75%
Reasonable library of built-in objects to furnish your designs.

Ease of use 71%
Design controls seem complex at first but become easier with practice.

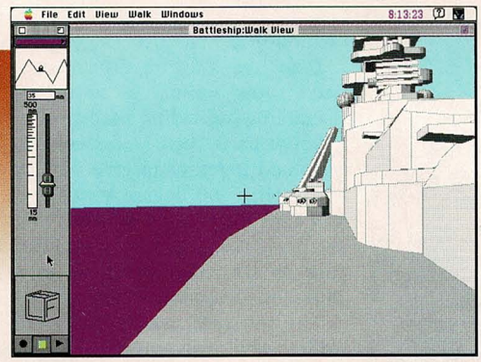
Documentation 78%
Helpful, with plenty of examples to follow.

Value for money 70%
Not a bad tool for the price.

MACFORMAT RATING 72%



An overhead plan view of the incredibly complex battleship model supplied with *Virtus Walkthrough Pro*.



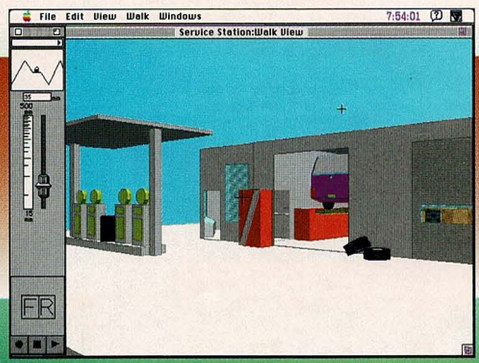
You can walk about anywhere on the battleship, and you can even walk on the water if you want to impress your mates.

make it as realistic as possible. In fact, there are so many texture features and options that they have their own tutorial guide. Brilliant stuff!

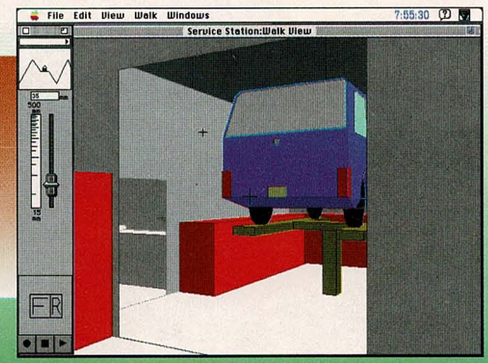
When you're actually constructing your walk-through movie you use the Walk View window. The Walk View displays a 3D rendered view of your scene. By using the mouse, the **[command]** key and the **[shift]** key you can explore the virtual world you have created. And what's more, you can even record your meanderings and play them back at a later date. The recorded walk-through is saved as part of the scene file.

Virtus WalkThrough Pro is a well designed, easy-to-use application for creating stunning virtual worlds in 3D. The only problem that I encountered while using *Virtus WalkThrough Pro* with System 7.5 was, erm, to be absolutely frank, it crashed every time I tried running it. Even after disabling all extensions except *QuickTime 2.0* I still didn't have any success. Eventually I had to reinstall System 7.1.0 on my LC475 – and finally I had *Virtus WalkThrough* up and running perfectly.

Apart from this single drawback, I really can't think of anything bad to say about this program. Get it, it's great. *Clive Parker*



Here's the final rendered picture of the service station. Using the mouse you can "walk" anywhere within the image...



... and you can move anywhere with the rendered scene – you can even go inside buildings and walk through walls.

VIRTUS WALKTHROUGH PRO

Price: £376.00. Out: now
Requires: any Mac with 2Mb of RAM (4Mb recommended), System 6.0.5 or later (System 7 recommended), 32-bit Colour *QuickDraw* required on any Mac II using System 6.0.5. It doesn't seem to like System 7.5.
For more details contact Gomark on 071 731 7930.

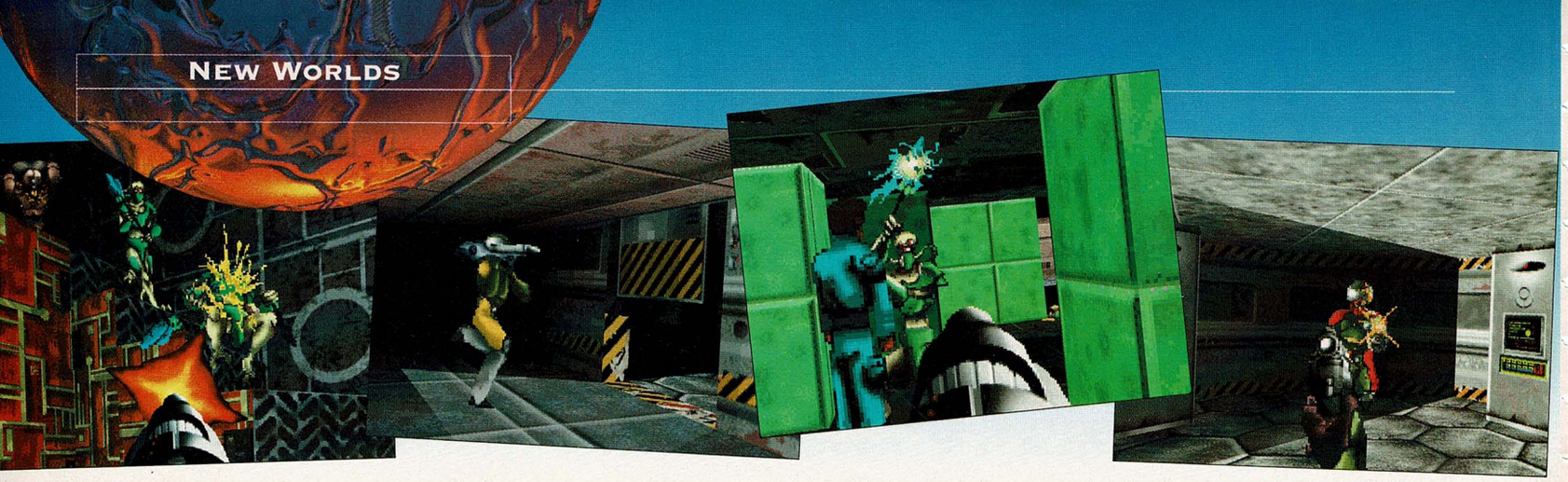
Features 90%
Loads of tools, a comprehensive range of textures, more options than you can shake a virtual stick at, and a big library of objects to use.

Ease of use 84%
Looks daunting at first, but it's actually easy to master.

Documentation 85%
A compact tutorial and a comprehensive, easy-to-follow manual.

Value for money 71%
Slightly too expensive to be good value.

MACFORMAT RATING 85%



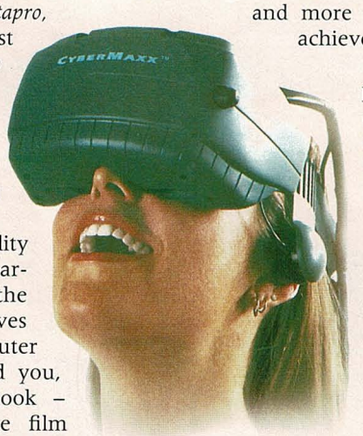
Virtual presence

Stepping into virtual worlds with the aid of a cyber headset is no longer such a far-fetched dream as you may think. Richard Hill reports...

Reality ain't what it used to be. Nor, for that matter, is virtual reality. As we've seen over the last nine pages, your Mac now gives you the power to generate virtual landscapes using *KPT Bryce* or recreate real ones with *Vistapro*, to generate more modest scenes with *Mac Interiors* and experience far-away places via the medium of CD-ROM. You can even wander through a world of your own creation using *Virtus WalkThrough*.

So a form of virtual reality is all around us, if you'll pardon the phrase. True VR, the dream technology that gives you the sense of the computer creating everything around you, including the way you look – taken to extremes in the film *Lawnmower Man* or the mesmerising TV series *Wild Palms* – is some way off.

However, it's just come a step closer, with an imaginative tweak to Apple's *QuickTime* movie system. *QuickTime VR* brings the work of David Hockney to the Mac. During the '60s he produced a succession of works with a simple camera, photographing fragments of a landscape. He then joined these together to assemble a view of the scene that was wider and more alluring than anything he could achieve with a single picture.



Explore virtual worlds on your Mac with the help of the forthcoming CyberMaxx Headset.

QuickTime VR, in a similar way, places you within a room by assembling individual snapshots of different parts. Just 16 images can be joined together to give you an enveloping 360 degree view. You don't see everything at once; you see what's in front of you and can turn to see other areas, as in a dungeon adventure.

The software, which can work with any program that uses *QuickTime 2.0*, has been shown in public several times, including Live '94 (see MACFORMAT 19). The demo is set in a museum you can explore. It shows *QuickTime VR's* other facility – the ability to pick up and examine objects: if you click on a statue the screen shows you the artifact close-up and you can revolve the object with the mouse to view it from any angle.

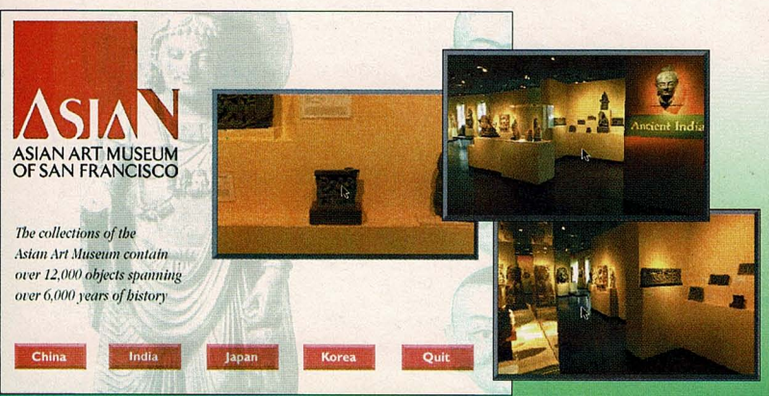
It isn't what purists would call virtual reality, but *QuickTime VR* still offers you the chance to visit places you couldn't afford to travel to, or to look closely at items you couldn't normally examine. The first *QuickTime VR* program is confirmation of this, giving you a tour of the Starship Enterprise in previously unimagined detail. *Star Trek: The Next Generation Interactive Technical Manual* is reviewed on page 72.

Next year sees the arrival of true virtual reality on the Mac – in a primitive but affordable form: the CyberMaxx VR Headset. This £586 headset is the creation of Illinois-based VictorMaxx Technologies, a company with the ambition to take virtual reality to the masses by bringing the CyberMaxx out on several different computer platforms.

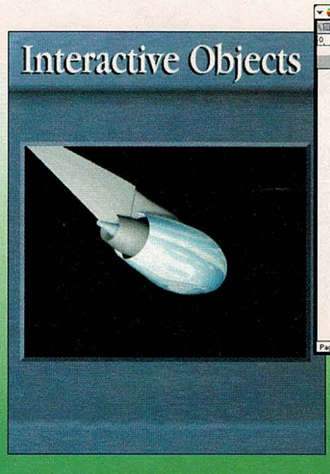
Next year sees the arrival of true virtual reality on the Mac – in a primitive but affordable form.

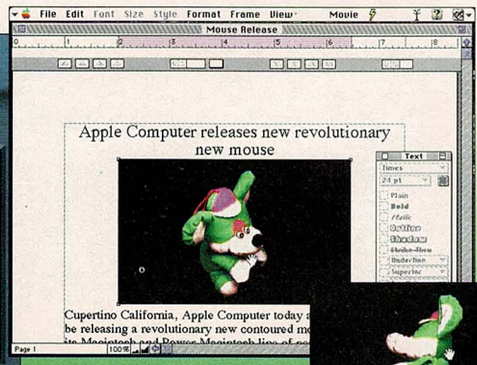
VictorMaxx's David Bisbee says, 'We're eager to get the Mac version out as soon as possible. We realise that people who have Macs tend to be quite sophisticated computer users. We want to be able to be compatible with all those new games that are coming out for the Mac.'

Looking much like the professional VR headsets you'll have seen and perhaps tried for a few minutes, the CyberMaxx brings your Mac to life before your very eyes. Programs can be written so they show a stereoscopic image – the same image seen from two slightly different angles. Within the headset a different view goes to each of your eyes and your brain blends



The museum in this *QuickTime VR* program was created by joining together simple photographs. You can explore the room and click on certain objects to take a closer look.

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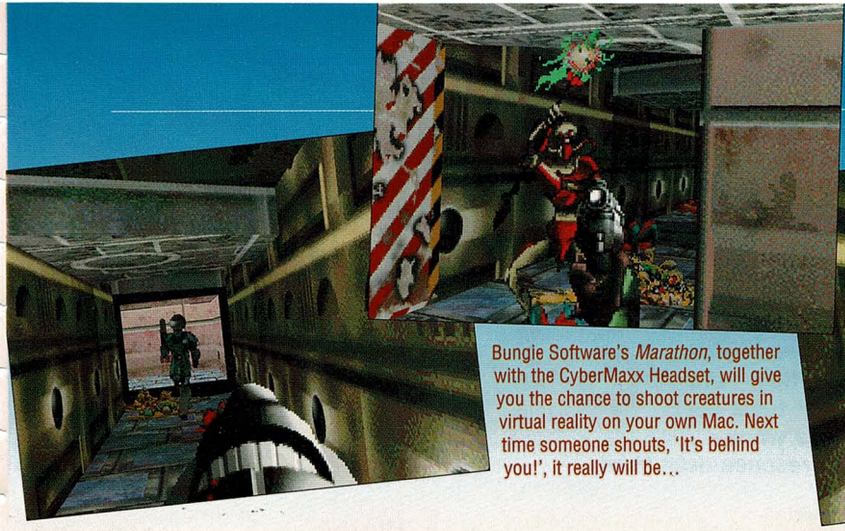
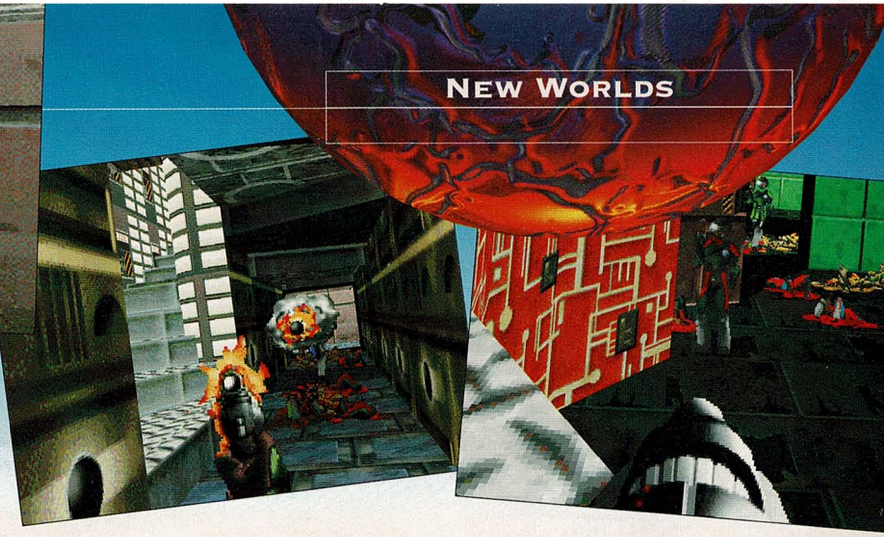
You can examine objects closely and view them at any angle. You can even incorporate them in your word processor with a little help from *Quicktime 2.0*.



Bungie Software's *Marathon*, together with the CyberMaxx Headset, will give you the chance to shoot creatures in virtual reality on your own Mac. Next time someone shouts, 'It's behind you!', it really will be...



them together to convince you you're seeing something with the depth of the real world.

As Bisbee explains, a program that can cope with the headset can be written with little effort. 'The game software has to incorporate the tracking so it responds to the person's head, so they can move around within the game. To incorporate tracking only takes about a couple of days – it's not a very difficult process.'

Consoles like the 2000 CS series from Virtuality, shown here, have given many of us our first experience of virtual reality in action.

One of the first games that'll work with the CyberMaxx is *Marathon*, a frantic 3D gunfest that came out in the US last month. Jason Jones worked on the game for Bungie Software. 'We knew we were eventually going to get into VR,' he says. 'We didn't expect it to be this soon, but from the start, we set up *Marathon* to let you look up and down, which is an important feature for a headset. We set it up so you could render a stereo image. If you plan from the start it's not that big a deal.'

The future of virtual reality can be glimpsed with more sophisticated systems from Silicon Graphics and Virtuality. These systems are too expensive for most people, but the units are bought by firms who are coming up with ever more creative ways to make money from them.

Zona Systems takes Virtuality-made VR consoles on the road for you to play – you might have seen these at the recent Future Entertainment Show. Zona's Gary Towning says the firm is adding advertising to its repertoire: 'We're going to Moscow, introducing virtual reality at the same time as promoting a brand of vodka. We also do a lot of corporate entertainment work for big firms that want to show they associate themselves with high technology.

'Our main concentration in the near future is using it as a promotion and marketing medium. Rather than seeing the advert on TV, you're in it.'

You could also soon be seeing VR consoles in your local multiplex cinema, says Towning. 'We're in discussion with several movie distributors to tie in the medium with film.'

Towning explains that entertainment was always going to be the first key market for VR. 'It takes time to persuade industry to use VR because it tends to be bespoke software, which is usually expensive. With the leisure market, you make one bit of software and place it in different sites. You can get VR off the ground a lot quicker that way.

'Now that is changing – virtual reality is moving into the medical field, the educational field and always has been in the military field, but obviously that's behind closed doors.' An offshoot of Zona called Envisage is developing VR training programmes for the oil industry.

Spending your time in virtual worlds will bring its own problems, as Doug Zartman of Bungie Software explains. 'The response time to motions of the head is fast – it's actually so fast it can be disorientating to the user if they turn their head very quickly. They might swivel all the way round to face the wall behind them and not be able to figure out where they are.

'That was our experience using the CyberMaxx headset at a number of conventions. Once they put it on, people started turning every which way and running around. They got lost and bumped into walls. We really had to slow them down.'

Learning to move your virtual body properly takes little time, but a more serious issue that's kept firms away from pushing VR into the home is safety. The press has been full of scare stories of headsets with flickering displays and magnetic fields causing headaches and worse.

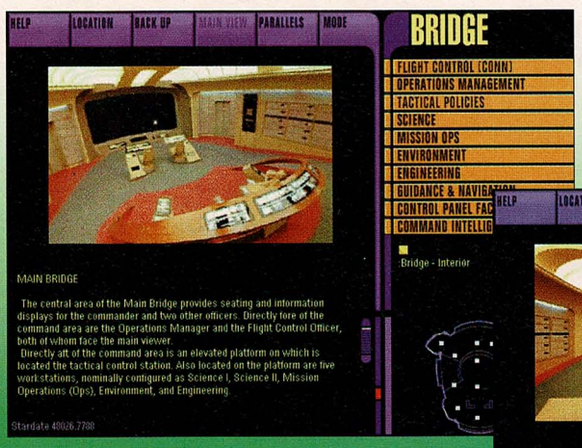
David Bisbee of VictorMaxx says the firm has the problem licked, despite the headset's low price, but agrees: 'There are people who have concerns about safety. We're now using liquid crystal displays instead of the cathode ray displays of a Mac monitor or TV set, so we don't give off the electromagnetic radiation that way. The tracking system doesn't use magnetic fields – just a liquid that moves with your head.'

Virtual worlds bring their own problems: 'People got lost and bumped into walls.'

Bisbee adds you still shouldn't spend too much time with the headset on, evoking the science fiction scenario of people losing themselves in computer dreams. 'We still recommend that people don't use them for more than 15 to 30 minutes at a time – just because if the software is good, you really do feel as if you're in this environment. It's a trade-off – people want to feel like they're really there, but you don't want people doing that for hours.'

A virtual universe is coming, with its own temptations and dilemmas. It won't challenge the real world, but there's no harm in escaping for a while.

Richard Hill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MAIN VIEW
PARALLELS
MODE
BRIDGE
FLIGHT CONTROL (CONN)
OPERATIONS MANAGEMENT
TACTICAL POLICIES
SCIENCE
MISSION OPS
ENVIRONMENT
ENGINEERING
GUIDANCE & NAVIGATION
CONTROL PANEL FACTS
COMMAND INTELLIGENCE
Bridge - Interior
MAIN BRIDGE
The central area of the Main Bridge provides seating and information displays for the commander and two other officers. Directly fore of the command area are the Operations Manager and the Flight Control Officer, both of whom face the main viewer.
Directly aft of the command area is an elevated platform on which is located the tactical control station. Also located on the platform are five workstations, nominally configured as Science I, Science II, Mission Operations (Ops), Environment, and Engineering.
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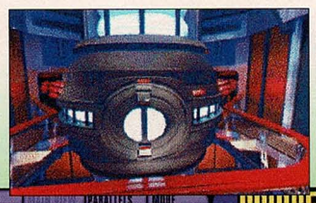

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The first *QuickTime VR* program is already out – it's the *Star Trek Interactive Technical Manual*, which gives you a guided tour of the Starship Enterprise.

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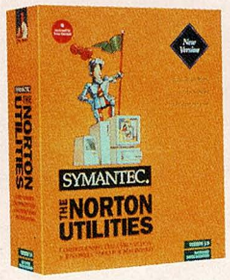

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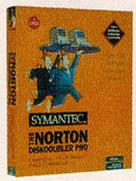

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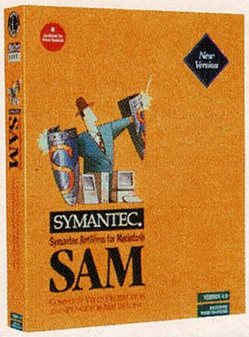

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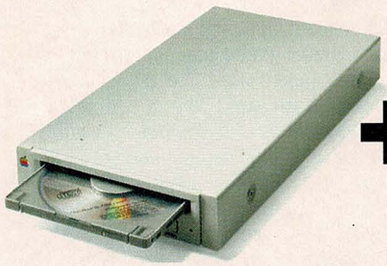

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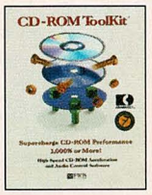

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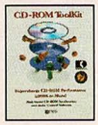

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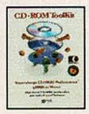

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Painter 3.0

Painting by pixels is getting more sophisticated, with upgrades now coming thick and fast. Brian Larkman reviews the latest...

WIN! ONE OF FIVE COPIES OF PAINTER 3.0 – SEE PAGE 130

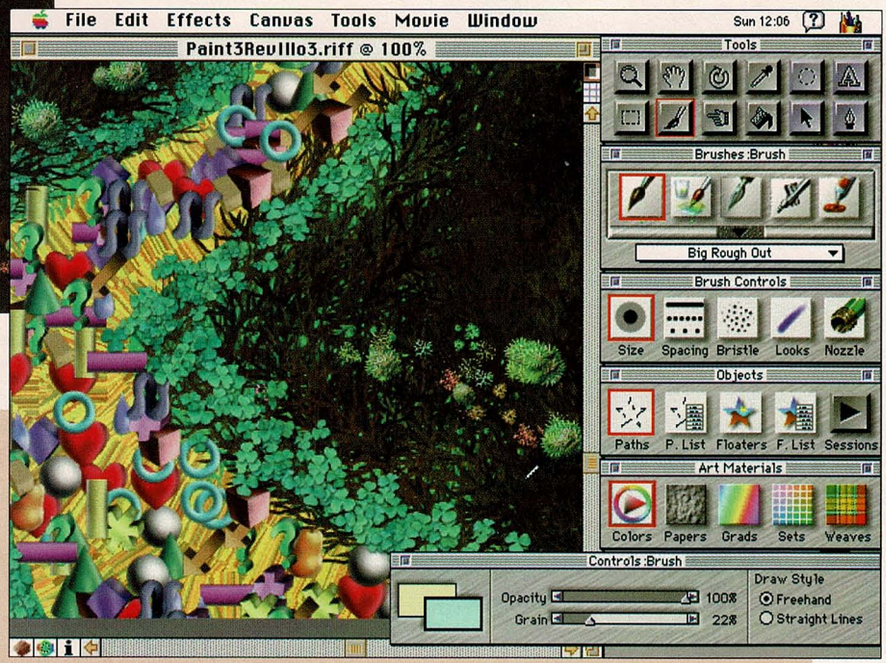
The Image Hose is an astonishingly versatile tool that can be used to build up intense layers of detail with ease. Here the yellow road was drawn with the new Piano Keys Artist Brush but all the other elements were 'sprayed' on. Most of these 'nozzles' are to be found among the 30 or 40 provided on the Extras CD, together with 100 stock photographs, movie clips, tips and hints, paper textures, brush looks and floater libraries.

Modern art takes on a whole new meaning when applied to paint packages – the software is changing by the month. Aldus and Adobe have recently transformed *FreeHand* and *Photoshop* yet again, and now Fractal Design has launched an upgraded version of *Painter*. For the artist this means having to spend time learning where your favourite tools are all over again. So is it worth it?

Well, yes. After a bit of work the new version of *Painter* is a dream come true – especially for those who have never used the X2 extensions. You get decent features like a compact interface, animation, layers (or 'floaters' as we will memorably have to call them), and a pattern-creating 'Image Hose'. After you've slogged up the steep learning curve *Painter 3.0* is a far more useful program.

The new interface uses a grown up version of *Dabbler's* twee drawers and drawer-fronts metaphor. All the old tools are still there but the icons are smaller, neater and in different places. Using it is like returning to your home town after ten years to find that the council have done it up.

At first it's a bit disorientating, but you soon find your way and realise how neat and uncluttered it can be. Some space is still wasted for the sake of an attractive layout. Yet you only need to have the tools you want on screen so the eternal scrolling is over. Even on a 14-inch monitor there now seems to be space for both



Usually, the palettes you require are stacked to the right of the screen. But here Tools, Brushes, Brush Controls, Objects and Art Materials are kept out as a set. A Control Palette at the bottom varies its display to suit the tool in use.

WHAT'S NEW IN VERSION 3.0

Adjust Colours: controls the overall hue, saturation and value of a complete image or a selected range of colours – does purple apples with ease.

Animation: create Frame Stacks – sequential sets of images that can be painted individually or with batch operations. Import or export as numbered frames or *QuickTime* Movies. Use two, three, four or five layer Onion Skin tracing paper. Paint Image Hose 'nozzles' – a walking figure, for example – on to sequential frames.

Annotate Colours: name each colour, set colour, and display the names on an image. Find colours by name.

Bristle Modelling: better Natural Media simulation with fine control over bristle characteristics such as thickness, striation and 'clumpiness'.

Capture Brush: capture customised brushes from the painting and save in libraries.

Colour Sets: create customised palettes of colours in any size and orientation, and save to disk. Means you can be sure of colour consistency from job to job.

Floaters: any number of floating selections can now be used and layered, each with variable opacity, feather, composite method, and masking. Floaters palette allows grouping, and controls Mask Visibility.

Gradations: grab custom gradients from the screen and store in libraries. Gradations palette for easy modification and use.

Image Hose: paint with pictures, spraying a series of images with each stroke. These could be natural forms like clover leaves or objects like coins, laid down at random or tiled. Even frames from *QuickTime* movies can be sprayed. Excellent for building up repeating structures like forests (or areas of vegetation) and cityscapes.

Image Warp: warp an image as if it were printed on a rubber sheet!

Posterize With Colour Set: using a specified Colour Set reduce the range of colours used to create a posterized effect.

Rotate Page: turn the working page to suit your natural drawing position.

Session Export: sessions can be exported as *QuickTime* movies to other applications.

WHAT'S NATURAL

To use computers for their work, artists need to emulate the soft-edges, blends, bleeds and textures of the familiar natural media. The arrival three years ago of *Painter* transformed computer artists' expectations of paint programs.

Gone are the usual tools of traditional bitmap painting systems – simple, one pixel pencil, dot splattering 'airbrush', flat-colour flood-everywhere 'fill', constrained hard-edge polygons.

Instead, *Painter* and the programs that have developed from it provide a full range of artists' materials that work almost exactly like their natural counterparts.

For particular tasks you can open a series of palettes/drawers fully to make all the options instantly available. One key-press removes all these palettes from the screen in one go so it is feasible to have all open at once and flip back and forward. Here a Gradient builder, Brush Looks, Sessions and Floaters are all available.

JARGON BUSTERS

Palette: A floating window with buttons. In *Painter 3.0* it's intended to resemble a drawer-front.

Drawer: In this context a drop-down extension to a palette that resembles a view into an open drawer containing extra tools and function buttons, four or five of which can be dragged individually to the palette 'drawer-front'.

Rotoscoping: The process of painting over a series of movie frames to produce an animated sequence. The Snow White character was animated in this way.

picture and palettes – quite a novelty.

The complete list of new features is too long to describe in detail (see the What's New box), so we'll concentrate on a few more important areas – layers, for example. *Painter* has followed *Photoshop* in offering layers (I can't quite bring myself to call them 'floaters'). They're areas of the image that float above the background and they can be moved, made transparent, feathered, painted on, masked and layered over each other independently.

In fact, *Painter* has had floating layers available for over a year via the X2 extension. All of the X2 innovations are now integrated into the main program – including colour sets, colour annotation, and masking brushes as well as the, er, 'floaters'. Any selection or mask can be floated by clicking on it with the Floating Selection tool. Once floating it can be controlled by the Object:Floater List and the Control Panel, allowing layer, feathering and opacity to be altered at any time.

The Image Hose enables you to paint with pictures instead of paint, spraying a series of images with each stroke. These could be natural forms, like branches or leaves, or man-made objects like coins or sweets. All of them can be splattered down at random or accurately tiled. This is an excellent tool for building up repeating structures like vegetation, rock faces or cityscapes. Undoubtedly third-party developers will soon start to produce some valuable sets of nozzles. In fact, anyone can set up their own frames, grabbing images from sets of floaters or even from *QuickTime* movies.

The Image Hose is similar to an Amiga tool called AnimBrushes, which was created by Electronic Arts for its *Deluxe Paint* program. In *Deluxe Paint* the images are usually sequential animated brushes that can be painted into a series of frames with a high degree of control over movement, size, orientation etc. This enables complex animated sequences to be created easily. *Painter 3.0* enables a sequence of nozzle images – a walking figure, for example – to be painted on to sequential frames in a Frame Stack using **Apply Brush Stroke**. But it lacks any real control. Perhaps eventually a 'Move' requester, like that on *Deluxe Paint*, will be made available.

As it is *Painter 3.0's* Frame Stacks provide an excellent way to produce animated sequences using a variety of methods. *QuickTime* movies or sequences of numbered frames can be captured and painted-over either individually or by using batch processing methods – a process which is known as Rotoscoping.

Several Frame Stacks can be opened at once and blended together using any of *Painter's* usual tools. The Frame Stack palette allows up to five frames to be viewed one above the other semi-transparently. This is called the Onion Skin effect and it's frequently used by animators. Animations created in this way can be played back within the program or saved as *QuickTime* movies.

The only way to really get to grips with the exhilarating power of this extensive upgrade to *Painter* is to use it 'in anger'. Have a go with the demo version on the CD. As you'll see, *Painter* is a wonderful program but it does have a painfully steep, nay, Everest-like, learning curve. This is a pity because it's probably of most use to real artists, who are among the most reluctant and technophobic computer users anywhere. Ideally there should have been a choice between Novice and Expert modes. As it stands, it's still worth the effort of learning, folks. *Brian Larkman*

Each object here was dragged and dropped into the picture over the 'woven' background from the 'Portfolio' Palette. The objects that appear to fade were modified by painting directly with a 'Masking Airbrush' so the transparency was created interactively without even having to think about a 'mask' layer or channel.

The Hula Girl floater here was dragged and dropped from the Portfolio palette on the right and is shown to be selected by the selection outline and the blue highlight in the Object:Floaters List. The same palette controls Masking Visibility, grouping, etc. The Control Palette controls Opacity, Feathering, Layer Level and Compositing Method.

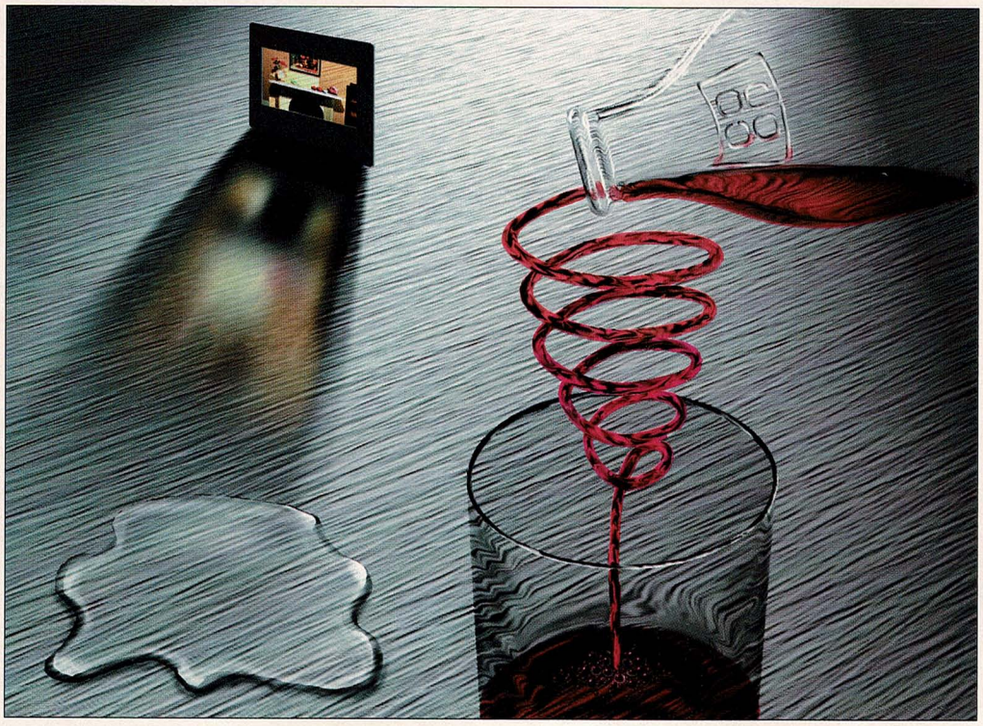
PAINTER 3.0

Price: £440.63 or £92.83 as an upgrade from a previous version. Out: now.
Requires: LCII or better (PowerMac native), 6Mb of RAM (8Mb for PowerMacs), System 6.0.7 or later, plus an FPU for optional extra effects.
For more details contact Letraset on 0171 928 7551.

Features Every medium known to art – all at once if you insist. Improved interface.	96%
Ease of use Much better than earlier versions but still not intuitive enough for technophobic artists.	80%
Documentation Everything explained in reasonable detail. Not too technical.	83%
Value for money Not bad, especially as an upgrade.	90%
MACFORMAT RATING	89%

Transparency

Impossible to paint? Nope. Most Mac paint programs can handle reflections on glass or distortions through water, as Brian Larkman discovers.



Getting transparency effects is largely the job of painting distortions and imperfections. We created every part of this picture in a paint or image processing program except for the slide, which was rendered in a 3D program. All the processes involved are described on these pages, and you can try them for yourself with the demos on on this month's CD-ROM.

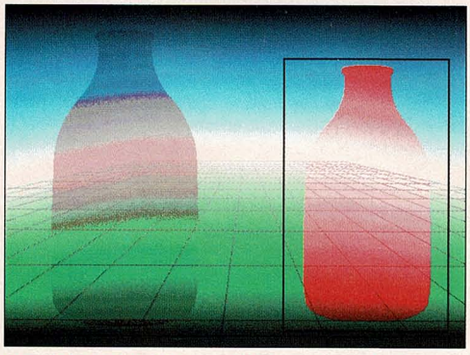
Transparency is one of the most paradoxical properties to create artistically. By its very nature, a truly transparent object is almost invisible. It is only from two sets of visual clues that we manage to perceive its form and solidity at all: the effects of reflection and refraction.

But most objects are not completely transparent. Usually they have a little colour so they stand out, tinted against their background. Here we explore all these aspects, and show you ways to give the impression of transparency.

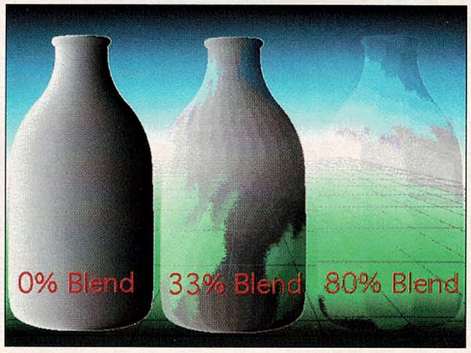
If you understand what clear materials do to the light passing through them (see the 'Really Transparent' box on the next page), you'll find there are plenty of tools available in most reasonable paint programs with which you can create the illusion of transparency. In fact, you don't have to be absolutely accurate to fool the eye. Real transparent objects contain all manner of combinations of reflection, refraction and filtering (as you can see if you examine a milk bottle half full of water), but simplified versions are quite adequate.

Therefore, for the purposes of these tutorials we shall replace the normal complex reflections with a basic 'windows' cliché, or simple highlights. We discussed reflection in MACFORMAT 18, so if you want to include accurate reflections and missed that issue, turn to page 98. This also means that we'll not even attempt to

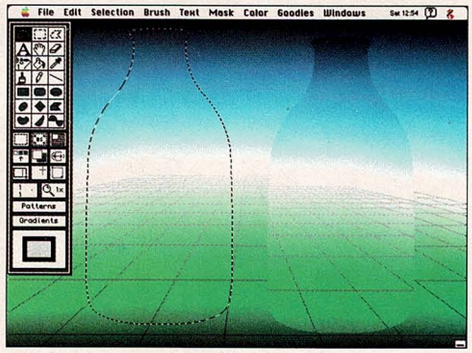
TRANSPARENCY WITH HUNDREDS OF COLOURS



Tint – Ideally it should be possible to create much of the illusion of transparency automatically with the program's tools. With only 256 colours available you need to experiment with simple methods. First a simple Tint is used to create a coloured-glass effect. In *Studio\8* tinting often causes excessive banding over gradient backgrounds. 32-bit systems (inset) are far smoother.



Blend – Some programs allow a floating selection to be semi-transparent or have a variable opacity. In *Studio\8* – used here – the Pickup/Mixed tool produces a variable blend between this gradient filled bottle shape and the background. Once again noticeable banding is produced and although the irregular marks look a little like imperfections in the glass the overall effect is crude.



Sliding – As usual, the simplest method is the most effective. Here we sited the selection slightly above its final position, then copied it and slid it down. The background is a gradient so the effect is of darkening the bottle slightly without spoiling the smooth gradient. Also, this trick suggests a slight distortion which looks quite realistic. (Actually, this only happens with thick or solid glass.)

create the extremely complex internal-surface reflections found in solid objects viewed at an angle of less than 45 degrees (try viewing a piece of flat glass in water at that sort of angle). Instead we will concentrate on the distortions caused by refraction, and the filtering effect.

Tinting by numbers

One of the immediate benefits of having a large colour palette is that you can tint areas of the screen, which gives the impression that coloured glass or plastic has been placed in front of the image. This illusion of transparency is taken for granted by designers who work with conventional media – they use transparency in every stage of their work, overlaying several colours to give translucency and depth to their images. On your Mac such effects are possible with very careful use of just 16 colours, but really 256 should be the minimum. Even then many problems can be encountered.

Most paint or image processing programs provide a number of tools to tint areas of a picture, though sadly Fractal's *Dabbler* is very poor in this area. The *Studio* series from Electronic Arts, for instance, provides a Tint modifier, a Tint mode for brushes and a Pickup/Mixed tool (this is called Merge in *Studio\32*). *Studio\8* gives a poor illusion whichever method you choose, but the Pickup/Mixed tool gives rather more realism and control.

For the illusion of transparency, you needn't be absolutely accurate to fool the eye.

Whatever tinting method you use, the limitations of a 256 colour palette are obvious: the smooth gradation of tone present on the original bottle is lost because there are insufficient shades of the background colours. *Studio\32*, *Painter*, *Photoshop* and most other modern packages overcome this limitation by having the 16 million shades of a 24-bit palette to choose from, as shown in the main illustration.

If you're limited to just eight bits (256 colours) by your program, it would be useful if the software could be set to add automatically the colours it needs for these colour effects from the 16 million available, rather than always being constrained to the fixed palette. The problem can be mitigated to some extent by very carefully setting up the initial palette. This requires considerable experience, though, and assumes that you know in advance exactly what colours will be used for the drawing – which is rarely the case.

Bending the rules

Light is bent when it passes from one transparent material to another. If a clear object is very thin the effect is minimal, so bubbles or windows hardly seem to distort at all. Thick, solid objects and containers full of liquid can exhibit extreme distortion, especially if the surfaces are curved. A lens or solid sphere can produce the greatest effect, focusing the rays to enlarge or reduce the background dramatically as well as invert or distort it.

Cylinders or bottles that are filled with liquid also change the scale of the background, but only in the one direction – that is, at right angles to their axis. Rectangular objects with parallel faces affect light differently. They don't distort the rays, they just shift the apparent position of the background, with the distance depending on their thickness.

On your Mac, transparency is possible with very careful use of just 16 colours.

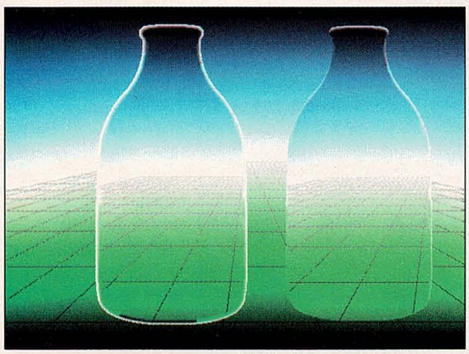
As we've observed before, the *Studio\8-32* series has more tools than most programs with which to distort the background, but even those are not perfect. Whichever program you use, you'll often need to Bend or Distort sections of the picture repeatedly to get anything like the correct effect. Fortunately, it's easy to

Really Transparent

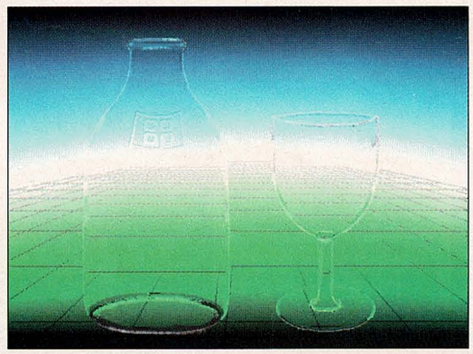
Light will pass through many kinds of material. Water and glass are obvious, but many other plastics and liquids are transparent to some degree. As light strikes a transparent material there are three things that can happen to it:

- If the surface is very smooth some light will be reflected perfectly, mirroring the surroundings. (If the surface is not smooth, however, the light will still be reflected but the rays will be broken up, so the surface will not produce a mirror effect.)
- The rest of the light will enter the object and be bent to some degree depending on the physical properties of the material – or more technically, its 'Refractive Index'. If the light leaves the object on the other side, it will be bent back by the same amount. Anything viewed through such a material will appear distorted or displaced. This is the principle by which lenses are made. This bending is called Refraction.
- If the material contains impurities it may well absorb some parts of the light so the rays that emerge on the other side will be tinted to the colour that has been absorbed. (It always seems odd that coloured light is actually the absence of that colour!) This process is called Filtering.

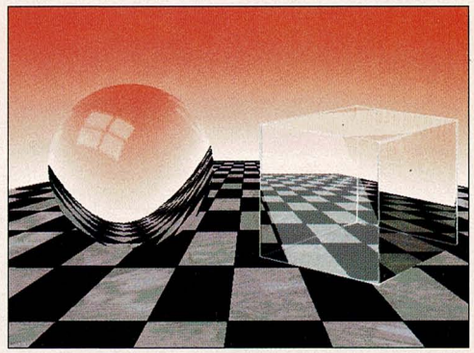
Here endeth the Physics lesson.



Edge Blending – Once you have defined the basic shape by sliding down to separate it from the background, you only need to trace it with a Watercolour or Blending brush. You can do this automatically in *Studio/8*, or by hand in other programs. The tool to use varies with the software, but try to distort the background slightly where it would be seen through the thicker part of the glass.



Hollow Bottle – We constructed the logo on a spare page and then selected it. The relief effect is produced by using the selection to copy a dark part of the gradient to the bottle, then overlap it with a lighter part, slightly offset. A little finishing and tidying up of both the logo and the rest of the bottle, using Lighten and Darken brush modes, adds realism and depth of field.



Solid Glass – Solid transparent materials can be more difficult to simulate because they involve more distortion. The sphere was created by copying the background area and bending it repeatedly. Darkening and surface reflections help the illusion. Each face of the cube is a section of the background, rotated or slid to simulate refraction. The Spherise tools of *Photoshop* and *Studio\32* are much easier.

PICK UP YOUR PAINTBRUSH!

You can try all these techniques and more using the demo of the recently released *Painter 3.0* which is on this month's CD-ROM. It's fully workable – we've included the whole program on the disc, but **Save** and **Print** have been disabled.

If you want to keep your creations, there's still a chance – we've got five copies of *Painter 3.0* to give away to the winners of this month's competition. See page 130 for details on how to enter.

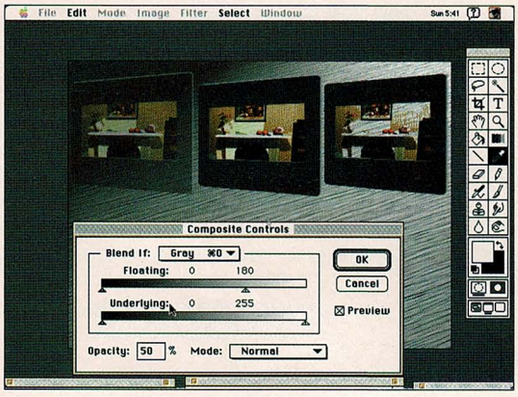
Painter 3.0 is the upgrade to *Painter 2.0*, mentioned in this article. It can handle any of the effects that the earlier version can, plus a lot more besides. To find out how good it is, check out the review on page 56.

deceive the eye so that reasonable illusions can be created with approximations.

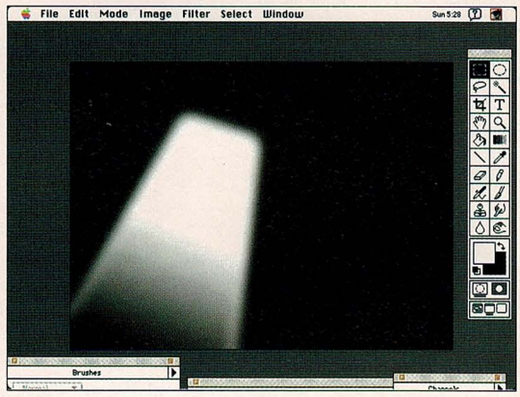
Ideally a tool to 'wrap' a brush or selection on to a pre-defined shape is required. *Photoshop* and *Studio\32* go some of the way by providing Spherisation tools, and *Kai's Power Tools* has several Lens filters, but other shapes and more controllable distortions would be useful.

The most useful tool for applying reasonably controlled distortions is Distorto provided by *Painter* and *Dabbler* (it's called Liquid Brush in *Dabbler*). We have used this extensively in the main illustration and its use is described in the

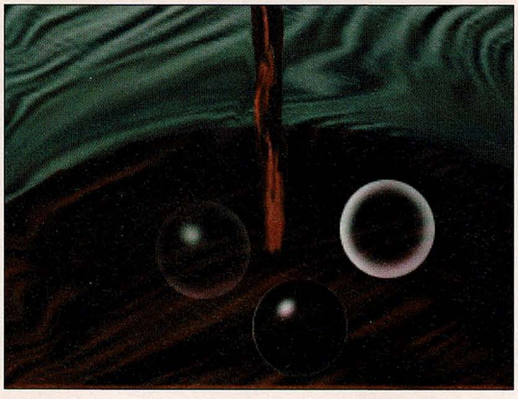
TRANSPARENCY WITH MILLIONS OF COLOURS



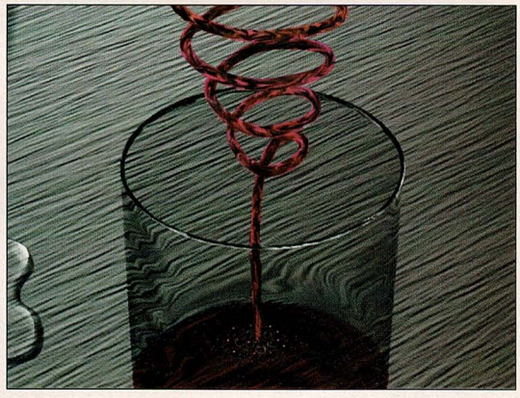
Creating a semi-transparent slide is a two stage job. The example on the far left is just a 50% blend, which looks too washed out. Using *Photoshop's* Edit/Composite Controls after you've pasted the slide, you can make the background show through the lighter parts (near left). Paste the slide again at a 50% blend. Only the lighter areas appear transparent (centre left).



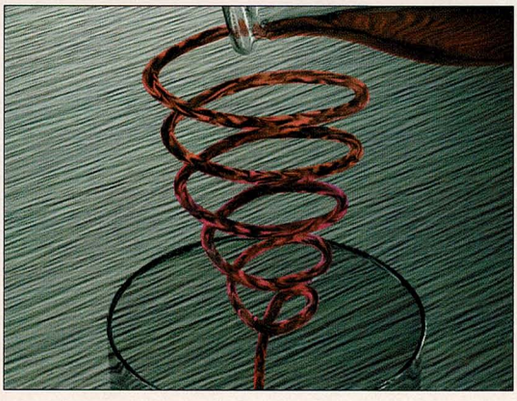
The shadow/cast-light technique depends on your software and the accuracy you require. Try the Gaussian Blur tool on the slide, select and Feather about 20 pixels, Flip vertically, Distort to the required shape and reduce opacity to 80%. For more sophisticated effects in *Photoshop* save the selection and modify the channel with the gradient and airbrush tools.



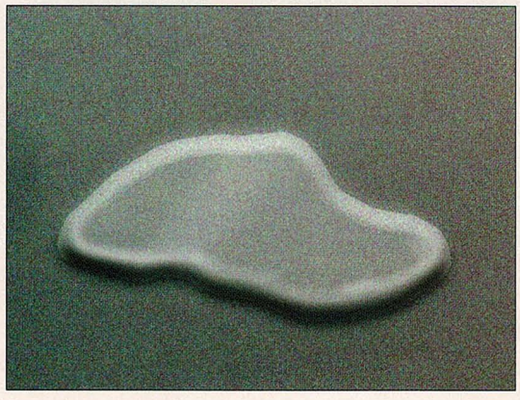
Bubbles are hollow and so do not distort their background. The simplest drawing technique is with an airbrush (far left). Even easier is *Kai's Glass Lens* plug-in. However, on a dark background the spheres it produces can be too dark, so if you draw a white outline first (near left), this creates a thin pale line around the bubble once the filter is applied (centre left).



Tinting or Filtering has been neglected so far because it is the easiest effect to apply. Normally it should be left until last so that all distortions will be coloured evenly. Most of the common Mac paint programs have some form of Colourise mode or Watercolour paint effect. This can usually be applied by a brush with variable degrees of opacity, or to a selected area.



We achieved the smoothing here with *Painter's* Distorto tool, but we could have used *Studio\32's* Smear and Blend or the Smudge tool in the other programs. To get a realistic flowing effect takes a little practice and as always you should study the real thing in detail first. Observe the way the 'ribs' of flowing liquid spiral round and create patterns on the surface.



You can easily create this effect in *Painter* by using a Feathered selection and then applying a surface texture. Here the Feather was nine pixels and the texture type was Frisket. We looked at the light direction in this illustration and then set the lighting effect in the Surface Texture Dialogue to match. As there is a preview you can adjust it quite accurately.

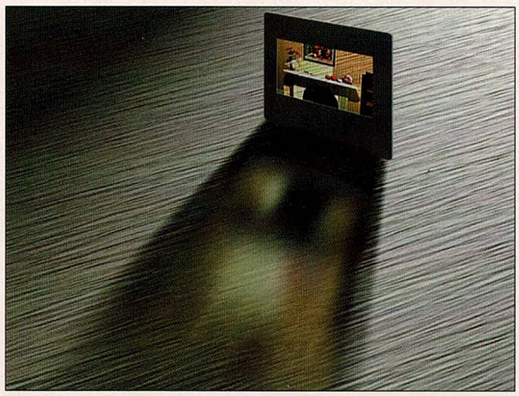
tutorials. Other programs have nothing to compare. The Finger tool in *Studio\32* and *Photoshop* should work in a similar way, but it seems to blur the areas it passes over far too much. Some of *Photoshop's* Distort Filters – especially Ripple, Twirl, Wave and ZigZag – can be used to get similar results, but they are less intuitive.

As with most techniques, setting up objects to copy is by far the best way to get accurate effects. Try putting empty or water-filled bottles, glasses and transparent boxes on newsprint. It's invaluable for seeing just what kind of distortions can occur.

Brian Larkman

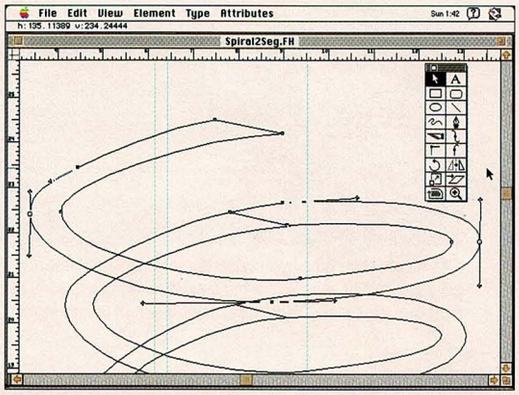
WHERE CAN YOU GET THEM?

- Fractal *Dabbler 1.0* costs £92.83. For more details contact Letraset on 071 928 3411
- Fractal *Painter 2.0* costs £381.88. For more details contact Letraset on 071 928 3411
- Fractal *Painter X2* costs £116.33. For more details contact Letraset on 071 928 3411
- Adobe *Photoshop 3.0* costs £851.88. For more details contact Principal Distribution on 0706 831831
- *Kai's Power Tools 2.1* costs £175. For more details contact Principal Distribution on 0706 831831
- *Studio\8* costs £199. For more details contact Electronic Arts on 0753 549442
- *Studio\32* costs £500. For more details contact Electronic Arts on 0753 549442

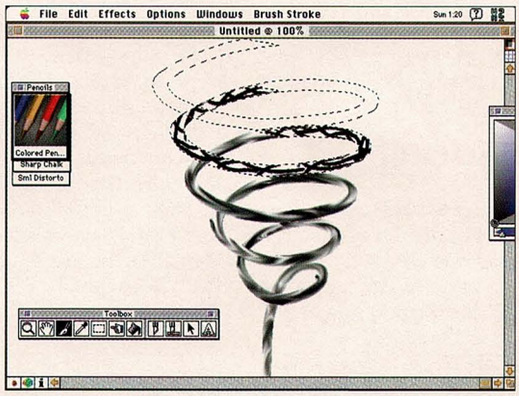


This final version required considerable extra work with the airbrush. The 'layering' tools in *Painter 3.0* and *Photoshop 3.0* make this type of job much easier. Feathering is easier to control in *Painter* and layer masks make *Photoshop* extremely powerful. The same sort of effect is possible with most other software, but it's usually a messier and more laborious task.

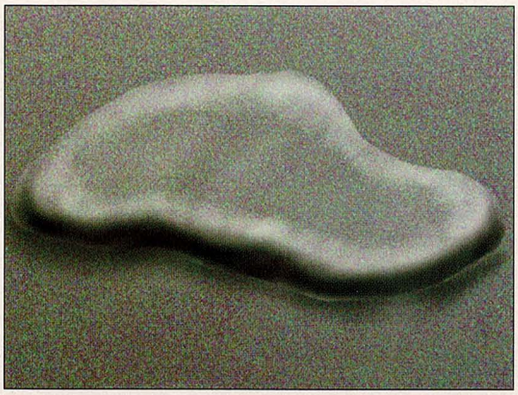
The joy of *Painter* and *Dabbler* is Distorto, which controls brilliant distortions like these with ease. Whichever program you use, glass is simple. Darken the whole shape, then outline the rim with thin black and white lines. Use Blend, Smudge or Distorto to smooth edges. The interior sides are distorted or darkened. The base is 'Domed' with *Kai's Glass Lens* plug-in.



When a complex mask is required it's far easier to create in a dedicated drawing program like *FreeHand* or *Illustrator*. The control over shapes that bezier curves give is not usually available in paint programs. Unfortunately, only the more sophisticated (and expensive) packages such as *Painter* and *Photoshop* enable bezier paths to be imported as masks or selections.



We created the mask for this spiral in sections so that the overlapping areas could be masked in sequence. In *Painter*, be careful not to move a section while you're selecting because this can't be Undone and it's hard to get the bits to realign. A flowing effect is created by drawing black marks angled along the direction of movement, into the centre of the flow.



With a little more skill, you can achieve exactly the same effect using a simple mask and a smooth airbrush. Here we darkened the area of the puddle slightly beforehand because of the 'wetting' effect. The edges need to be sprayed carefully to get a thin pale line at the bottom then a smooth darker gradient, then a broad pale band on top. The result: water with a mercurial edge.

If you observe a real puddle (always best for accuracy and artistic impression), you will see that the light reflected from the top of the water makes quite a hard line around the edge, as shown here. Compare this with the previous image. It looks clearer and shinier – somehow more transparent. The hard edge effect is achieved using a second mask.

Microsoft Word 6.0

The most popular word processor in the world has just been updated, and it's bigger than ever. Andy Hutchinson tries to get a word in edgeways.

Remember when John Lennon said (ironically) that the Beatles were more famous than Jesus? Well, I reckon that if anyone could make that particular boast these days, it's Bill Gates and his mighty Microsoft corporation. Everywhere you look in the media, there's an article or feature on William and his software company. The reason he's so high profile is because he's worth some nine billion dollars. He has accrued that loose change through his all-conquering PC front end, *Windows*, and through the massive sales of *Word*, his word processor.

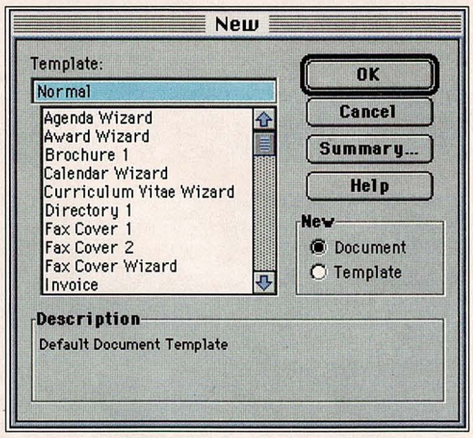
Given the popularity of *Word*, a major revision of the program is an event on a par with the launch of a new Ford motorcar. But the cynic in me can't help wondering: why? All right, so Microsoft programs are usually well designed and useful, but surely there are other programs out there that can compete with them? Are we in danger of making the assumption that *Word's* the best word processor on the market, simply because Microsoft produces it?

Big and friendly

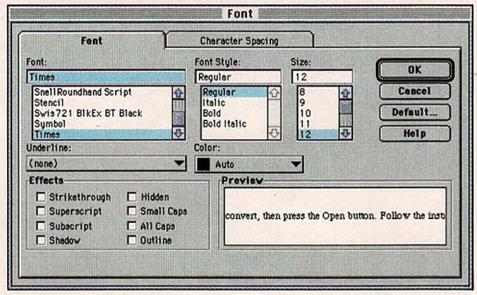
Word is a very, very large program. If you want to perform the complete installation of the program, you can kiss good-bye to an incredible 25Mb of hard drive space. Plump for what Microsoft calls a 'typical' installation and you'll need 9.5Mb. And if you choose the skinny minimum installation, you'll still need 5Mb. Oh, and if you've got a PowerMac you can add another 3Mb to each of those figures. Something tells me that sales of *DiskDoubler* are suddenly going to soar.

With installation complete and *Word* nestling in a bulging folder, you can actually load the program. At first sight, it's immediately obvious that there are some major new features in this upgrade. Delve a bit deeper, though, and you discover that the main reason *Word 6.0* exists is because the punters were having a bit of a problem getting the most out of *Word 5*. So many of the new features have been designed to make life easier. Portions of the program, such as the interface and the help functions, have received a complete overhaul, while other features such as the 'Wizard' automation are brand new. But let's look at the interface first.

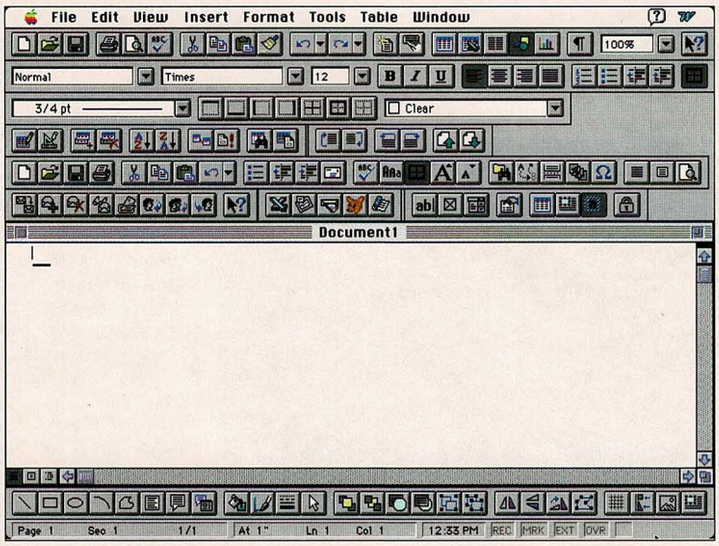
In the early days, pull-down menus were used to access *Word's* functions. Now every function is available from a series of toolbars which can be placed anywhere on screen. All the commands, options and features that you'd normally choose through a keyboard shortcut or from a pull-down menu have been turned into buttons and placed on these toolbars – and they can be configured the way you want them. Should you discover that there's a command that's not on the toolbar, you can create a macro for it, assign a button and add it to the toolbar. If all those buttons are getting in the way of the text – and they do, sometimes –



To pick a Wizard you just choose from a list of options. The calendar's useful, but I can't see much point to the Purchase Order template that's also on offer.

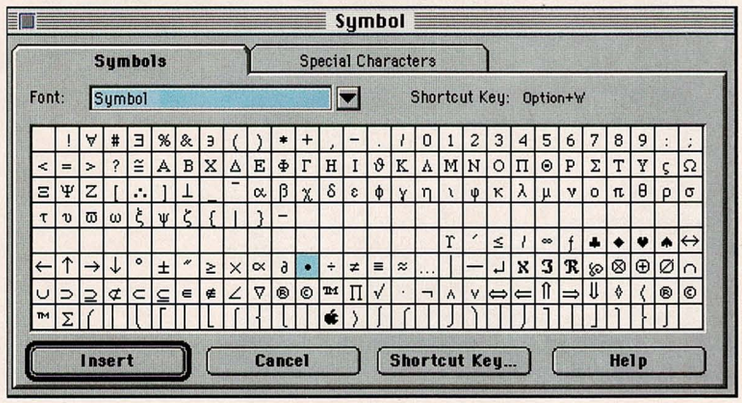


Nice touch, this. When you enter the font dialogue box you get a preview of your text in the new style. Makes picking the right one a lot easier if you can't remember all the names.

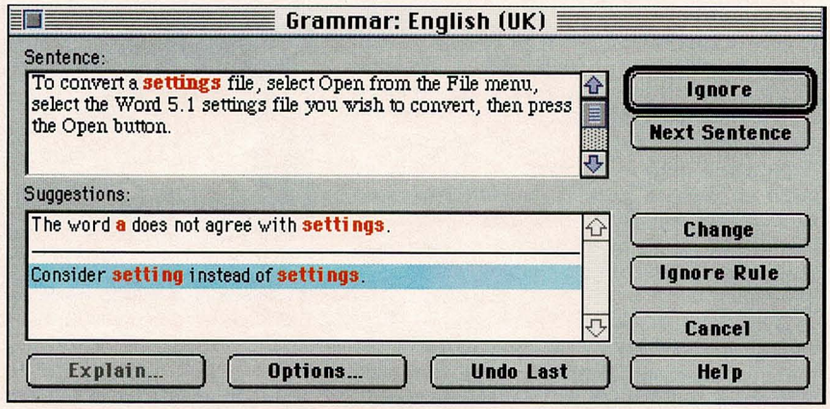


If you're a particularly stupid person, *Word 6* gives you the option to add every single one of the toolbars to your screen. Not much room left to type in though.

For that newspaper style design, you can add a drop cap to your text. You can specify the font and the number of lines it drops by.



Definitely a handy tool, this. All of the common special characters are included in this groovy dialogue box. Should help you avoid randomly punching **[option] [letter key]** combinations.



Quite possibly the most superfluous module in *Word 6* is the grammar checker. If you're *that* bothered about your writing skills then you should go back to school.

Lost for words, don't know where to turn, feel unable to pull a book off the shelf? You'll be needing the fully-equipped thesaurus then.

then you can switch to full screen view mode, which displays only the text, with no menus.

Many of the most commonly used commands (such as **Cut**, **Paste**, **Copy** and **Font**) have been placed in a pop-up menu. To activate this, you hold down the **[control]** key while clicking the mouse. This menu is context sensitive, and changes depending on whether you're clicking over text, graphics or a table. Very neat, and it quickly becomes intuitve.

Technical wizardry

Judging from the manual, Microsoft is very proud of *Word's* Wizard functions. Wizards are scripts that automate the design and compilation of a document. To use these, you select **New Document** from the **File** menu and click on the appropriate template. There are Wizards for letters, CVs, manuals, memos, calendars and other, mainly business oriented, documents. They all minimise your design work without forcing you to use exactly the same template each time. You create a page by choosing from a list of options on screen – the design, format and information you require are then slotted into place.

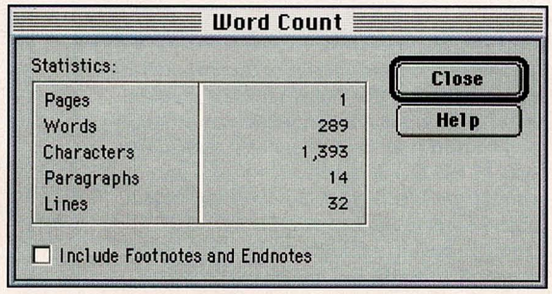
Should you require further help from the program there is a series of Auto functions. AutoCorrect rectifies spelling mistakes as you type. *Word* enables you to enter any mistakes you commonly make into the spell checker, along with the correct spelling. Then, should you type in 'teh' instead of 'the', the program automatically corrects you. You can also use this function to abbreviate commonly used phrases and have the program convert them into their long format. The addition of graphics is speeded up by the AutoText function. This works along similar lines to AutoCorrect, except that instead of correcting spelling mistakes, *Word* will insert a graphic every time you enter a particular combination of letters.

The AutoFormat feature should prove popular with anyone who hates tarting up pages once they're written. Select this function and *Word* will analyse your document and apply the formatting it considers appropriate. Indents, bullets, spacing and headings can all be changed by the program and you can agree to each change as it occurs. AutoCaption enables the user to annotate graphics in a variety of styles. *Word* will also remember how many graphics you've used, so that they're all numbered correctly.

If Word were a vehicle it'd be one of those lumbering American 'mobile' homes fitted with everything.

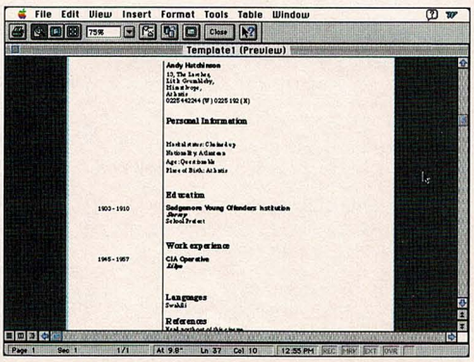
The **Undo**, drag-and-drop and **Find/Replace** functions have also been improved. The **Undo** button actually lists the changes that you've made in a drop-down box. Should you decide that the style change you made three paragraphs ago doesn't look too brilliant, you simply choose it from the **Undo** menu and the text reverts to its original style. If you're incredibly indecisive, you can then 'redo' what you already 'undid'.

Find/Replace has been souped up considerably. One of the biggest hassles with searching

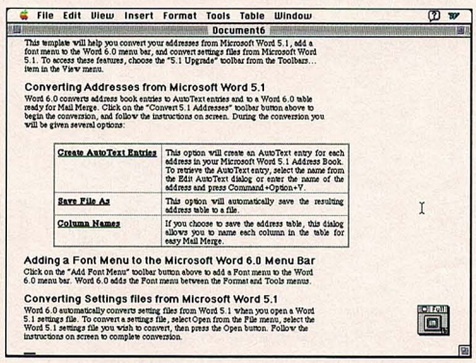


Yes, it counts words too, but funnily enough it won't tell you what your Flesch rating is. I would have thought Microsoft would have jumped at the chance to include such frivolous extras.

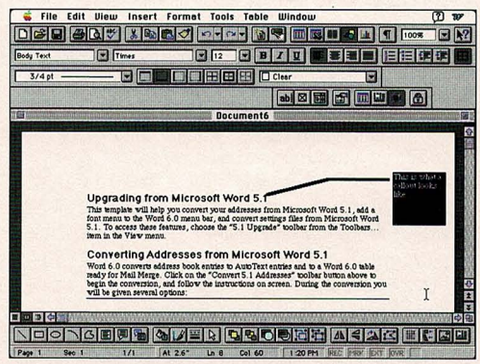
Yes there's a spell checker, yes it can ignore words in capital letters, yes you can add words to the AutoText checker and no, 'you'd' isn't in there. You'd better believe it.



When you're finally happy with your text, you can see what it'll look like when printed. My CV's looking snazzy – even if it is a work of fiction.


File Edit View Insert Format Tools Table Window
Document6
Converting Addresses from Microsoft Word 5.1
Adding a Font Menu to the Microsoft Word 6.0 Menu Bar
Converting Settings files from Microsoft Word 5.1

Once you're bored with all those annoying toolbars, you can hit the Full Screen option and simply type your text in. What a refreshing change.


File Edit View Insert Format Tools Table Window
Document6
Upgrading from Microsoft Word 5.1
Converting Addresses from Microsoft Word 5.1

Should you so desire, you can add call-outs to your text, complete with pointy arrow. You can also add borders around paragraphs.

for a particular piece of text was that **Find/Replace** couldn't look for special characters, such as tabs. All of these characters are now included and you can search for such obscure characters as em dashes and non-breaking spaces. This is very handy if you've imported a strange document type which includes all sorts of erroneous or weird characters.

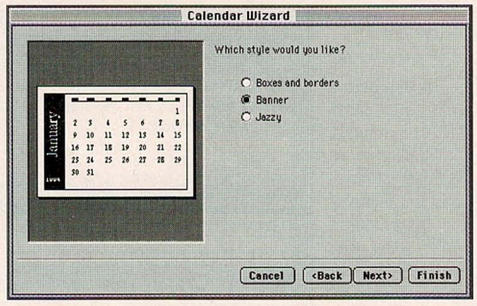
Jack of all trades...

As I thumbed through the 862-page manual that accompanies this program, I kept having to pinch my arm to remind myself that *Word* is just a word processor – in name, at any rate. A more accurate description would be document processor, because *Word* is just as happy performing DTP or graphics functions as it is in the more standard WP facilities. It comes equipped with modules which enable you to create anything from a fanzine to a legal document.

Given all of the bells and whistles that Microsoft has seen fit to include in this program, it comes as something of a surprise to discover that it's actually rather good at processing words. You can type words in and it'll justify or centre them. You can change the fonts, styles and sizes of text at word, sentence, paragraph, page or document level. You can view the page as it would appear if printed out. You can check to see how many words you've written and you can save your page for later retrieval. Five years ago those functions would have been perfectly adequate, but times change and the new facilities that software houses incorporate in their productivity packages soon become second nature and indispensable.

Take the humble spell-checker. When this first started appearing in word processors everyone raved about how it had made life so much easier. *Word*, of course, has a spell-checker. And as you can probably imagine, it's pretty comprehensive. It also incorporates a thesaurus and a grammar checker. Now I'm quite happy to believe that a thesaurus is an invaluable tool, worth its weight in words; but a grammar checker? At best these modules tell you when a sentence is too long, when you've used the word 'which' instead of 'that' and when you've forgotten to add a full stop. At worst, they come up with all sorts of complete rot, about contractions, adjectives and hanging participles. If you need to rely on a grammar checker then, quite frankly, you should employ someone to write for you.

Then there are the graphics functions. *Word* enables you to import a variety of different picture formats, to add borders to them, to modify their shade and even to create your own graphics. Here I would like to take issue with the Microsoft ethos of bundling every conceivable feature into programs. I'd make the same comment about the graphics modules as I did about *WordPerfect 3* – if I want to create graphics, then I'll use a graphics program. The reason for this is quite simple: *Word's* graphics facilities are primitive at best, and at worst they're reminiscent of so-called cave paintings. I can get far better results by using something like *FreeHand* or *Photoshop* than I ever could from using *Word's* graphics features. There just isn't any point in having an 'extra' like this when all it is is so much non-essential baggage. Specialisation isn't a dirty word.



This Wizard is creating a calendar for me. I've chosen the month, the design and the orientation. Didn't pick that graphic, though.

Want a closer look? There's a demo of Word 6.0 on this month's CD-ROM

Popular, but not perfect

If *Word* were a vehicle, it'd be one of the lumbering American 'mobile' homes – the ones fitted with Jacuzzis, saunas, planetariums and bowling alleys. Don't get me wrong, it's very nice knowing that all those features are there. After all, everyone loves gadgets. But they do tend to disguise the basic purpose of the program. *Word* is a word processor and it should concentrate on that above all else.

Way back in the mists of time, before my company decided to economise, we all used Microsoft *Word* (version 2.0 in fact). This was the perfect writing tool – everything was accessible, it ran quickly and efficiently and it took up little hard drive space. Then my company took it upon itself to kit all the writers out with *Nisus*, a program so awful that it should be eradicated from the face of the earth. *[For a more moderate view of the newest version, see page 66 – Ed.]*

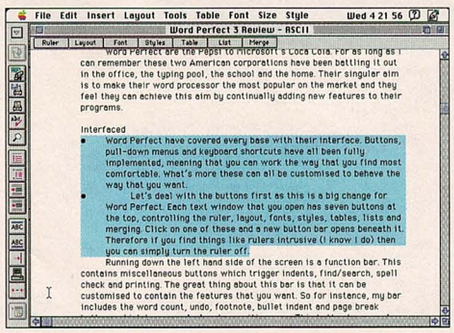
For a long time I missed *Word* and so it was with a degree of anticipation that I awaited the arrival of *Word 6.0*. I've used the program extensively for the last couple of months now and I must admit that I'm truly not massively impressed. It's a lot like bumping into an old school friend and discovering that the down-to-earth bloke that you used to know has gone upmarket and traded in his Ford Capri for a mobile phone, Psion organiser and personal fitness trainer. *Word* might well be the most popular word processor in the world, but I think it's hit a middle age crisis and should get some therapy – immediately. *Andy Hutchinson*

WORD 6.0 VS WORDPERFECT 3.1

The WordPerfect corporation and Microsoft are two giants battling it out for supremacy in a lucrative but cut-throat marketplace. Consequently each will quite happily pinch ideas from the other and go to any lengths to come up with new features for its programs. As a result, feature for feature, there are very few differences between these two programs. So the only real test is how pleasant they are to use.

Some four months ago (MACFORMAT 17) I reckoned that *WordPerfect* was the better program. Having given *Word 6.0* plenty of time I see no reason to alter my opinion. There's no doubt in my mind that *WordPerfect* is a far more productive tool than *Word 6.0*. This is because *WordPerfect* is a well designed program which hangs together brilliantly – you really feel that someone's sat down and thought about how people use word processors. *Word 6.0* feels like a collection of modules all packaged together for maximum appeal, not necessarily function.

To be fair to *Word 6.0*, I would say that business users will love the templates, mail merge and Wizard facilities that are included in the program. But if you're a creative type, or you use a word processor at home, or you find that the technology gets in the way of the finished product – then you should get *WordPerfect*. Both packages are marvellous tools, but *WordPerfect* wins through because it feels more like a word processor should be, not an exercise in clever programming.


File Edit Insert Layout Tools Table Font Size Style
Word Perfect 3 Review - ASCII
Ruler Layout Font Styles Table List Merge
Word Perfect are the Pepsi to Microsoft's Coca Cola. For as long as I can remember these two American corporations have been battling it out in the office, the typing pool, the school and the home. Their singular aim is to make their word processor the most popular on the market and they feel they can achieve this aim by continually adding new features to their programs.
Interfaced
Word Perfect have covered every base with their interface. Buttons, pull-down menus and keyboard shortcuts have all been fully implemented, meaning that you can work the way that you find most comfortable. What's more these can all be customised to behave the way that you want.
Let's deal with the buttons first as this is a big change for Word Perfect. Each text window that you open has seven buttons at the top, controlling the ruler, layout, fonts, styles, tables, lists and merging. Click on one of these and a new button bar opens beneath it. Therefore if you find things like rulers intrusive (I know I do) then you can simply turn the ruler off.
Running down the left hand side of the screen is a function bar. This contains miscellaneous buttons which trigger indents, find/search, spell check and printing. The great thing about this bar is that it can be customised to contain the features that you want. So for instance, my bar includes the word count, undo, footnote, bullet indent and page break

WordPerfect 3.0 has about a million features too. But somehow it seems to be a more cohesive package.

WORD 6.0

Price: £220, but shop around for deals. £90 to upgrade from previous versions. Out: Now.
Requires: LC or better, 4Mb of RAM (8Mb on a PowerMac), at least 6Mb of hard drive space (8Mb on a PowerMac), System 7.0 or later (System 7.1 on a PowerMac).
Machines not compatible with *Word 6.0* are: 128K & 512K Macs, Mac Plus, Mac SE, Mac Portable, Mac Classic and Apple PowerBook 100.
For more details contact Microsoft on 0734 270001, or your local dealer.

Features 93%
Absolutely every conceivable function's in here – no doubt *Word 6.1* will do weather forecasts.

Ease of use 89%
The medium does tend to get in the way of the message, but there's a comprehensive help facility.

Documentation 92%
An absolutely enormous manual covers all of the features in a great deal of detail.

Value for money 92%
For your £200 you're getting a hell of a lot of program. But how much of it will you end up using?

MACFORMAT RATING 92%

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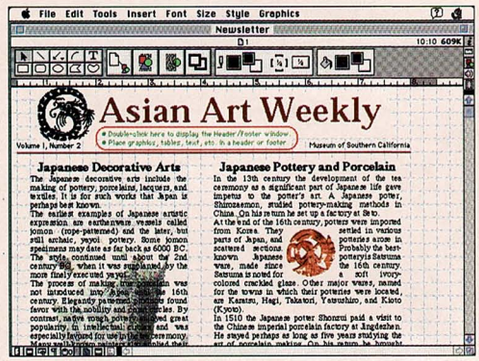
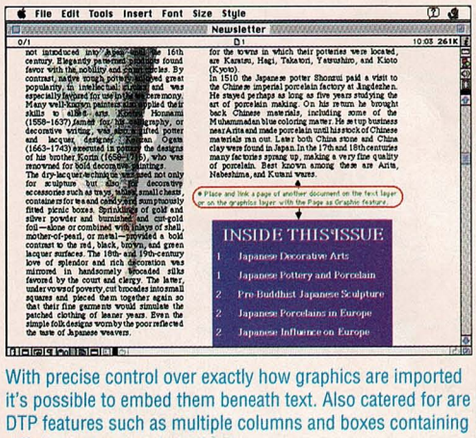
Nisus Writer 4.0

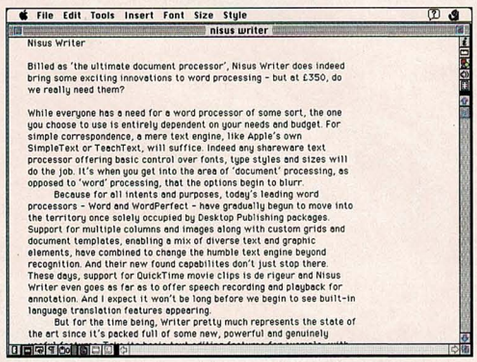
Billed as 'the ultimate document processor', *Nisus Writer 4.0* really does bring some exciting innovations to word processing. But when they come with a price of £350, do we need them?



A word processor with grids and graphics creation tools? Yep, sure is. *Writer's* graphics handling is superb.


File Edit Tools Insert Font Size Style
Newsletter
INSIDE THIS ISSUE
1 Japanese Decorative Arts
1 Japanese Pottery and Porcelain
2 Pre-Buddhist Japanese Sculpture
2 Japanese Porcelains in Europe
2 Japanese Influence on Europe

With precise control over exactly how graphics are imported it's possible to embed them beneath text. Also catered for are DTP features such as multiple columns and boxes containing different colours and typefaces.



Here's *Nisus Writer* at its most basic – being used as a simple text engine for writing this review. Notice the icons, along the horizontal and vertical scroll bars, representing, among other things, different page views, buttons for importing sounds and access to any of ten clipboards.

Almost everyone needs a word processor of some sort, but the one you choose will depend entirely on your needs and budget. For letters and suchlike a mere text engine, like Apple's own *SimpleText* or *TeachText*, will suffice. Even a shareware text processor offering basic control over fonts, type styles and sizes will do the job. But if you want document processing as opposed to word processing you'll want something more sophisticated...

For all intents and purposes, today's leading word processors – *Word* and *WordPerfect* – have begun to move into the territory once occupied solely by Desktop Publishing packages. Support for multiple columns and images, along with custom grids and document templates, has now changed the humble text engine beyond recognition. Nowadays support for *QuickTime* movie clips is *de rigueur* and *Nisus Writer 4.0* even offers speech recording and playback for annotation.

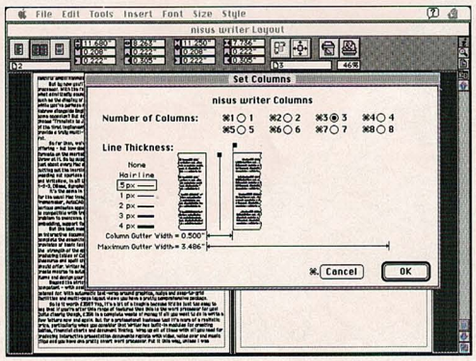
For the time being, *Writer* pretty much represents the state of the art. It's packed full of new, powerful and genuinely useful features. Take its basic text editing features. You get unlimited use of **Undo** and **Redo**, so the whole process of writing becomes much easier. You can highlight separate words and groups of text for quick and easy editing and styling. You also get support for multiple clipboards and the inclusion of *PowerFind*, a utility which will find any word, anywhere in any document regardless of whether it's open or not. All these features are strong additions to the armoury of the standard word processor.

Nisus has also brought a number of new ideas to document processing. Aside from support for multi-columns and graphic elements, and the necessary tools and views for effective control over page layout, *Writer* also includes an integrated graphics utility with which you can create 256-colour illustrations. Also included are tools for the precise alignment and layout of imported images, and facilities to generate tables and equations automatically. These diverse elements can be formatted to preset or user-customise document styles, giving *Writer* a host of features which even top-notch DTP packages can't boast.

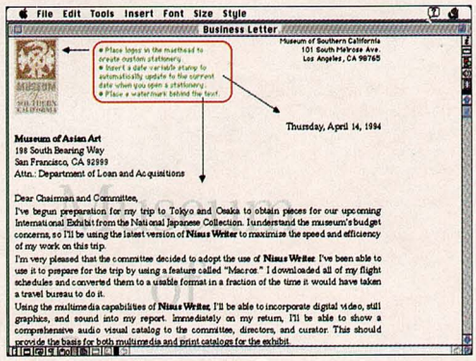
Why's all this DTP stuff here? Well, Nisus wants to encourage us to 'break out of one-dimensional word processing and create interactive documents'. Maybe we will, but I suspect multimedia presentations will remain a specialised niche for some time. This isn't to say that the facility to incorporate *QuickTime* movies into documents isn't useful, but surely no one would employ them on anything more than an occasional basis.

It's the same with *Writer's* sound annotation features. Here you're able to assign sounds to any word, element or area of a document, which, when triple-clicked, will play back. Since a built-in sound recording utility with basic editing functions is available at the click of an icon, you can use your Mac's microphone to add voice-overs left, right and centre. Undoubtedly this has its uses too – proofing and approval spring to mind – but for the average user they're whistles and bells.

But by now you'll have worked out that



This is jolly useful. Choosing the Page Layout icon enables you to reflow the document as a three column grid. This process is absolutely straightforward and comes with infinite **Undos** and **Redos** so you can experiment, or slip up, to your heart's content.


File Edit Tools Insert Font Size Style
Business Letter
Museum of Southern California
101 South Hakvee Ave.
Los Angeles, CA 98765
Thursday, April 14, 1994
Museum of Asian Art
198 South Bearing Way
San Francisco, CA 92393
Attn.: Department of Loan and Acquisitions
Dear Chairman and Committee,

In this view of one of the sample business templates you can see that *Nisus Writer* shows just what the writer is capable of producing. Here we have different languages – like Russian, Hebrew or Japanese – on the same page along with superimposed background text.

Nisus Writer 4.0 isn't an average word processor. It is genuinely innovative. For instance, it has the facility to speak back to you any part or the whole of a document (in what admittedly sounds like rather primitive Robospeak). Plus it has quirky features such as the display of multiple languages on the same page. Perhaps you've got no immediate use for including Arabic, Japanese, Russian and Hebrew alongside English in your documents, but what's to say you might not have in future?

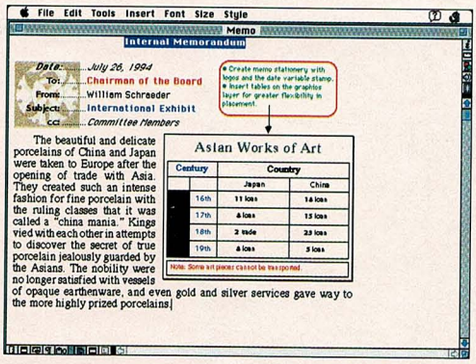
Don't get the idea you can highlight a paragraph of English and choose 'Translate to Japanese' from a **Style** menu. What we have here may well be one of the first implementations of Apple's *WorldScript* systems architecture, which is intended to provide a truly multi-lingual computing environment. But it isn't the stuff of dreams – yet.

So far we've looked only at the most notable features of Nisus' latest offering – it's time to look under the hood. A good word processor should be able to open anything that you throw at it. *Writer* makes an excellent attempt, supplying filters which will automatically convert documents created in just about every Mac and PC word processor on the market. No more scrolling through foreign format documents and weeding out spurious characters. You get converters for *Word, WordPerfect, MacWrite, WordStar* and *WriteNow*, in all their incarnations. And you get filters for *Lotus 1-2-3, DBase, Symphony* and *Multimate*.

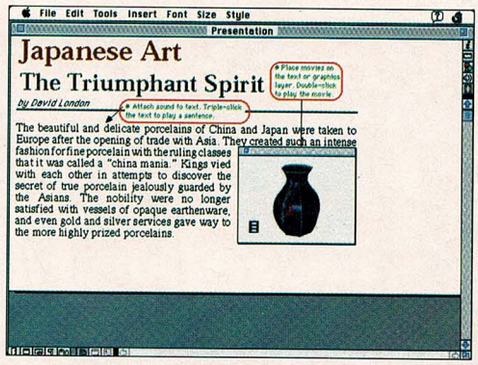
It's much the same approach in the graphics

Nisus Writer will even speak back to you – admittedly in rather primitive Robospeak.

department. *Writer* provides built-in support for the usual Mac image formats via Claris' *XTND* system and also for the more esoteric *Framemaker, AutoCAD, GIF, Harvard, PCX, BMP* and *Ventura* image file formats. The only serious omission appears to be the lack of any *TIFF* or *EPS* translators, but since *Writer* is compatible with translators from Claris and DataViz this may not be too much of a problem. Other lower-level components include document


File Edit Tools Insert Font Size Style
Memo
Internal Memorandum
Date: July 26, 1994
To: Chairman of the Board
From: William Schraeder
Subject: International Exhibit
cc: Committee Members
Asian Works of Art
Century
Country
Japan
China
16th
11 loss
16 loss
17th
6 loss
15 loss
18th
2 trade
23 loss
19th
6 loss
3 loss
Note: Some art prices cannot be reproduced.
The beautiful and delicate porcelains of China and Japan were taken to Europe after the opening of trade with Asia. They created such an intense fashion for fine porcelain with the ruling classes that it was called a "china mania." Kings vied with each other in attempts to discover the secret of true porcelain jealously guarded by the Asians. The nobility were no longer satisfied with vessels of opaque earthenware, and even gold and silver services gave way to the more highly prized porcelains.

Producing tables to sit within documents is also made as easy as pie thanks to *Writer's* built-in Table Editor. This can also import any data you might need from spreadsheets and databases elsewhere. Very useful if you ever find yourself needing to deal with statisitcs, damn lies or whatever.


File Edit Tools Insert Font Size Style
Presentation
Japanese Art
The Triumphant Spirit
by David London
The beautiful and delicate porcelains of China and Japan were taken to Europe after the opening of trade with Asia. They created such an intense fashion for fine porcelain with the ruling classes that it was called a "china mania." Kings vied with each other in attempts to discover the secret of true porcelain jealously guarded by the Asians. The nobility were no longer satisfied with vessels of opaque earthenware, and even gold and silver services gave way to the more highly prized porcelains.

Importing *QuickTime* video clips is simplicity itself. The first frame of the movie will reside anywhere you want on the page – double-click on it and it'll play.

linking and embedding, support for *AppleEvents, PowerTalk* and Publish and Subscribe.

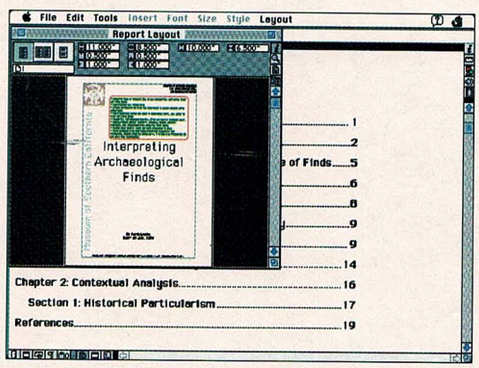
But the best measure of a word processor – even if it is verging on the edge of being an interactive document processor – is the quality and range of the tools on hand to complete the essential tasks of word processing. It should have basic features like automatic save and backup and multiple open files, of course. But it also needs to be good for indexing, cross-referencing and producing tables of contents. And it should have stationery and label templates, glossaries, a thesaurus and spell checkers.

Writer has all these and more. It provides the tools for you easily to create macros to automate repetitive tasks, assign your own keyboard shortcuts to menu items and design character and paragraph style sheets.

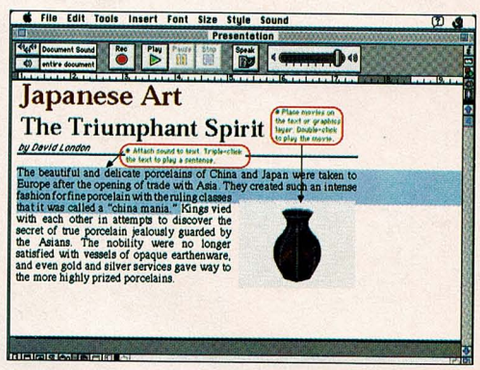
The handling of graphics – though not strictly word processing – is equally competent. Scaling, duplication and rotation of both pictures and text boxes are all catered for. You get a pretty comprehensive package, with automatic text-wrap around graphics, nudge and snap-to-grid facilities and multi-page layout views.

So is it worth £350? That's a bit of a toughie. It'd be too easy to say that if you're after this range of features then this is the word processor for you. Quite clearly though, £350 is a complete waste of money if all you want to do is write a few letters now and again. But for a professional business tool it's more of a realistic price, particularly when you consider that *Writer* has built-in modules for creating tables, financial charts and document linking.

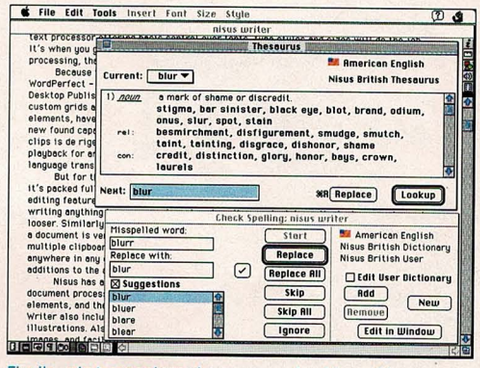
Wrap up all of these features with all you


File Edit Tools Insert Font Size Style Layout
Report Layout
Interpreting Archaeological Finds
Chapter 2: Contextual Analysis 16
Section 1: Historical Particularism 17
References 19

Writer is dead handy for working with long documents too. From the page layout view you'll see that it's easy to check exactly what's where. You can then produce a contents list – a great help with anything from newsletters to university theses to manuscripts of your latest novel.


File Edit Tools Insert Font Size Style Sound
Presentation
Japanese Art
The Triumphant Spirit
by David London
The beautiful and delicate porcelains of China and Japan were taken to Europe after the opening of trade with Asia. They created such an intense fashion for fine porcelain with the ruling classes that it was called a "china mania." Kings vied with each other in attempts to discover the secret of true porcelain jealously guarded by the Asians. The nobility were no longer satisfied with vessels of opaque earthenware, and even gold and silver services gave way to the more highly prized porcelains.

By clicking on the sound icon you can highlight an area of text and have the words read back to you. Alternatively you can hook up a microphone and record your own voice.



Finally, what a good word processor should provide as a matter of course – a decent thesaurus and spell checker – here shown on the page simultaneously. The multiple **Undos** and **Redos** are very useful for when you're struggling for that word dangling on the tip of your tongue.

could need for producing interactive presentation documents replete with video, voice over and music clips and you have one pretty smart word processor. Put it this way: unless I was specifically intending to produce newsstand magazines or glossy brochures I wouldn't bother with a DTP package. And even though I hate to say it, it gives my old workhorse, *Word 5.1*, a hard run for its money. How does it compare with *Word 6.0*? See the review on page 62 and decide for yourself.

Andy Storer

NISUS WRITER 4.0

Price: £351.33. Out: now.
Requires: Macintosh SE or better, 2Mb RAM and System 7 or later.
For more details contact Softline on 081 401 1234.

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There's such a wide range on offer you couldn't really ask for more.

Ease of use 90%
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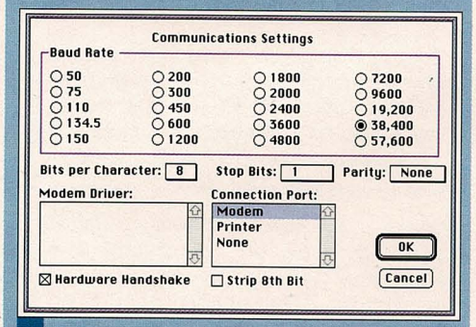
How much does it cost?

FutureConnect costs **£17.63** (£15 plus VAT) a month. There are no usage charges, so you can stay connected all day for the same amount (except for BT's contribution, of course). There is also a one-off connection fee of **£58.75** (£50 plus VAT). The first year's fee is payable in advance, so you can get 12 months of Internet connection for **£270.25**, including VAT – about a fiver a week. In subsequent years, the price falls to **£211.50**, which is about £4 a week.

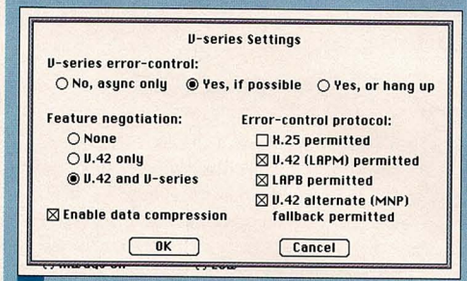
Easy loader

Trawl the 'Net and you may find great freeware. But downloading it can cost time, money and effort – unless you follow some golden rules...

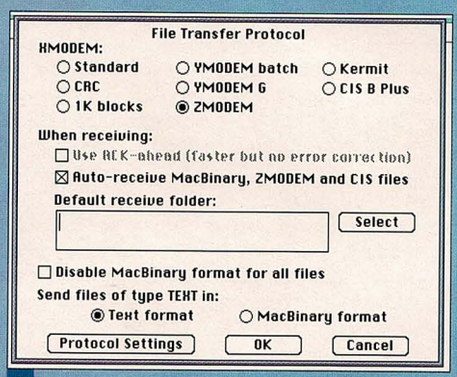
GETTING READY



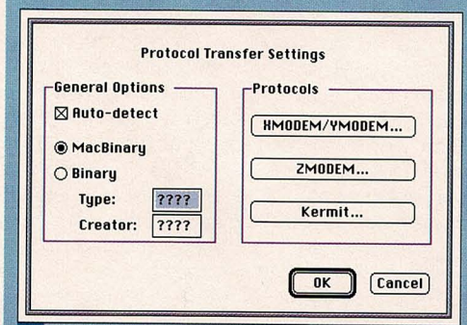
1 This screenshot assumes you're using the *Smartcom II* comms package and have selected **Hardware handshake** to ensure optimum file transfer speeds.



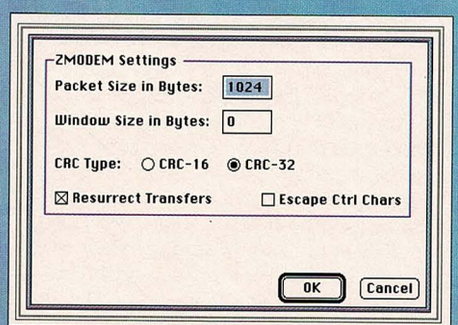
2 Since your modem supports V42.bis and MNP5 you've set the bps to a higher rate to take advantage of its built-in data compression. This saves time. And in comms terms, time is money – your phone bill. So it's worth pushing your modem to the max.



3 You also need to make sure your software is set up to receive binary files automatically as MacBinary files and send text files as text files.



4 From the **Protocol Transfer** menu select Zmodem as your means of file transfer. It's the most efficient available, and if you don't select it you'll automatically end up using CIX's slower default setting – which, once again, will increase your phone bill.



5 You want to be able to resume transfers automatically if the connection goes down. So check that this is set. And once connected to CIX, double check your file transfer protocol is set to Zmodem. Enter **edit profile** and **list** its contents (not shown in screenshot).

Buying a modem means you can plunge into the arcane world of comms and gain access to the thousands of freeware and shareware titles available on the Internet. But how do you find these files? By taking up our offer of free registration to CIX you can let someone else's fingers do the walking... See the 'Free registration' box on page 70.

The conference areas on this UK-based service – and on others such as Demon (081 343 3881) and MacTel (0602 455444) – contain a wealth of the latest files ready and waiting for download. You can also transfer files to and from your own private directory. But the intricacies of successful file transfers may need a little explanation. So here goes...

There are three points to bear in mind about file transfer if you wish to keep your costs down to minimum. First, you should ensure you connect to CIX at the highest possible baud rate that your modem will support. Second, you should choose the fastest file transfer protocol. And third, you should get to grips with file compression in order to minimise transfer times. Together, these three prerequisites will shave valuable units off your telephone bill.

Modems on max

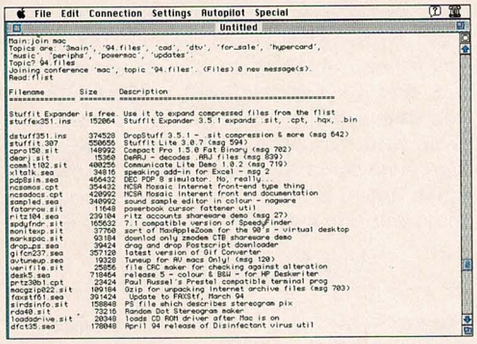
The first point is easy to rectify. Just make sure your comms software is set up to transmit and receive at the highest rate your modem supports. But this may not just depend on its documented rate – your modem may have a built-in data compression system such as v42, v42bis or MNP5. These provide the error correction essential for fast file transfer. And if your modem does support any of them you should set your comms package to talk to it at about twice the rate it makes a connection at. So if you've a 9,600 baud modem which supports these compression systems, set your comms program to communicate at 19,200 bps – better, try 38,400 bps and see if you can push it to the max.

The reason for increasing the baud rate settings of your software in this case is so your comms package can exchange data with your modem as fast as possible. The software is rather like an interpreter translating between two people who don't speak the same language. It needs to get the information it has to convey as quickly as possible so it can pass it down the phone line with minimal delay. Otherwise the data compression facility is wasted.

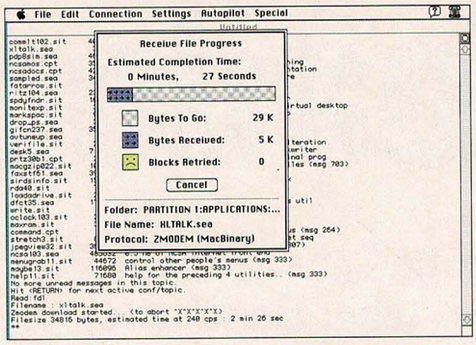
The software is like an interpreter translating between two people who don't speak the same language.

Another means of making file transfers more efficient and error-free is to enable 'hardware handshaking' during connections. This is set from within your comms package and is essential to minimise mysterious losses of text while uploading. Handshaking simply controls the flow of data between two modems, making sure there are no overflows by instructing modems to pause when needs be. Check your modem's manual to see if hardware handshaking is factory-set as default. And check that your modem cable has the necessary wires. Finally, set your comms package to enable it.

Once you've successfully connected to CIX you need to check what type of file transfer protocol you're using to upload and download data. CIX recommends using Zmodem because it's the most efficient. Zmodem also has a couple of other neat things going for it. First of all, it automatically receives files, so you don't have to waste time telling the remote computer to start transmitting or telling your comms package to expect an incoming file (as you do with the Xmodem and Ymodem protocols). Secondly, if you do have a crash during a transfer, Zmodem will resume transferring the file where it left off. So if you only have half the



When you join the Mac conference, choose the **94.files** topic and enter **flist**. You'll then get a listing of all available files. Have a good browse and then decide which of these you fancy downloading to your machine.



Enter **fdl** at the prompt and choose your filename – in this case xltalk.sea. Because you've chosen Zmodem as your protocol, the file is thence downloaded automatically and you can track its progress.

file successfully downloaded, all you have to do is log on again, download the same file, and Zmodem will just add the incomplete data.

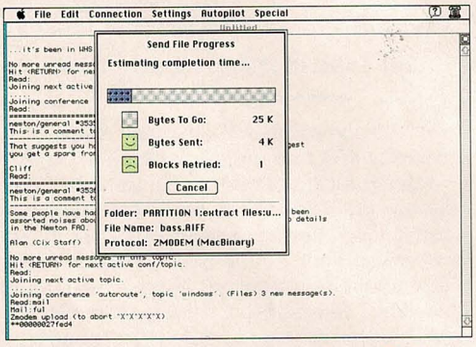
Getting some zeds

In order to use Zmodem you must first set your comms package to use it and ensure CIX knows that too. But by default CIX's modems are set up to receive and transmit using the slower Xmodem. You'll have to change the preferences CIX's modems will use when communicating with yours. You do this by entering **edit profile** at CIX's **Main** prompt, then using the built-in editor to change **option down x q** to **option down z q** and **option up x q** to **option up z q.** In both cases, replacing '**x**' with '**z**' will set CIX's default file protocol to Zmodem and enable it when you connect from then on.

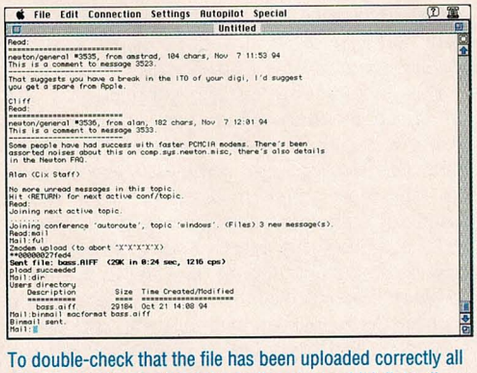
Once each of these preliminaries are set as the default preferences for your comms system you're already half way to successful file transfer. All that remains is to ensure you have the correct utilities to enable you to compress and decompress any files that you want to up- and download. The first port of call is to join the **Mac** conference. Choose the **94.Files** topic and enter **flist.** Here you'll find a listing which includes the latest self-extracting versions of *Stuffit* and *Compact Pro*. Mac files are mostly compressed using one of these two utilities. (You can tell this by the number of online files with the .SIT, .SEA and .CPT suffixes.) If you don't already have them you should download them immediately by using **fdl (filename).**

If you come across a filename with extension .ZIP, the de facto PC file compression algorithm, you'll have to hunt around for *ZipIt*, a Mac utility which decompressed these files. It's the same with other files you might want to download with extensions such as .ARC, .PAK, .ARJ and .LZH. But before finding Mac converters for these PC files make sure you'll be able to run them! If they only contain data or text material then fine, but if they're executable files you'll need PC emulation software. The way to find out what they contain is to type **fal(filename)** at the prompt. This will list the actual filenames contained in that compressed file.

Uploading your own files is pretty straightforward. First of all you should compress the chosen file before going online and save it with an extension such as SIT, SEA or CPT (your compression software will offer a default) so that anyone wishing to download it will know what format it's in. Then log on to CIX, join the conference and topic you wish to upload the file to and type **ful (filename).** Provided you're using Zmodem the upload will proceed automatically. If you're not then CIX will tell you so and instruct you to set your software to the correct protocol and commence transfer. Once uploaded the file won't be made available immediately – you'll have to mail the moderator of the conference with a message asking him to make it public.



Sending a binary file to another user requires you first to upload it to your private mail directory. Enter **Mail** at the prompt followed by **ful** and the filename.



To double-check that the file has been uploaded correctly all you need do is type **dir** at the mail prompt, which lists all files in your mail directory. You can then send the file to another CIX user by using the **binmail** command.

First class e-Mail

Sending binary or data files to other users as private e-Mail isn't really complicated either. Again, it's best to compress the files beforehand as self-extracting *Compact Pro* or *Stuffit* files to cut down on online charges. Once connected to CIX, you simply type **Mail** at the prompt and type **ful (filename)**. This uploads the file to your private mail directory. Once it's there you can type **dir** to check just what's in your personal mail folder.

Sending the file to another CIX user, or anyone connected to the Internet for that matter, simply requires you to enter **binmail (username) (filename)**. So if you wished to send a file named myprog.sit to MACFORMAT, for instance, you'd just type **binmail macformat myprog.sit** and the file would wing its way to our private directory. When we check our directory using **dir** and find your file all we need to do to download it is enter **fdl myprog.sit** at the **Mail** prompt and our Zmodem default transfer set-up will take care of the rest. Once it's downloaded we can log off and decompress the file you've sent us.

Finally, if you wish to send binary files to anyone on the Internet from CIX you append the full name of the target recipient, not just their CIX nickname. So sending myprog.sit to some chap in, say, Los Angeles would require you to enter **binmail buster@mcimail.com myprog.sit.**

Andy Storer

JARGON BUSTERS

Baud rate: the speed at which a modem can send signals over a telephone line. A 9,600 baud modem can send 9,600 bursts of information per second.

CIX: Compulink Information eXchange. A bulletin board service and one of several commercial 'gateways' to the Internet.

Modem: MOdulator/DEModulator – a small box which sits next to your Mac making pterodactyl noises while it connects your computer system to another via the telephone line. The noise is computer data being converted to audio signals which can be sent down the line. A modem at the other end converts the noises back to computer data.

'Net: or Internet. A worldwide group of interconnected computer networks which enables you transfer files, e-Mail fellow users, log on to remote services and access other services anywhere in the world.

FREE REGISTRATION!

As a special offer to MACFORMAT readers, CIX is offering free registration (worth £25) to any new member quoting the special code **macformat** when they log-on as a new user.

To take advantage of this incredible offer, just log-on to CIX on 081 390 1244. Type **CIX** at the **Log-in** prompt, then **new** at the **Nickname** prompt. You will then be asked whether you have a special code. Type **y** (for yes) and then, when asked for the code, enter **macformat.** You will be charged as normal for the time you spend on-line, but you will not be charged a registration fee.

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Tricks and Tactics for the Postal Service of the 21st Century
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"Bright, well-designed and certainly informative, the magazine oozed street credibility. By far the best Internet magazine to date."
Jon Ross, Publishing Director, VNU
(Note: Not someone from Future Publishing, but a direct rival!)
"Stylishly designed, .net offers a range of features explaining what the Internet is, and how to make the most of it. The approach is accessible and informative... and gives Future a good grounding for further growth."
The Magazine Business Weekly Report, 27 October 1994
"An immediate and striking editorial environment... [but] will the average would-be buyer of .net relate to a man with multi-coloured wires soldered to his head?"
Tony Westbrook, Editorial Director, Ziff Davis
Find out what they're all talking about! The new issue of .net is on sale on Thursday 1 December.
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Star Trek
The Next Generation
Interactive Technical Manual

Yet another *Star Trek* product launches into the market – can this CD-ROM boldly go where no previous spin-offs have gone before?

It had to happen. Many attempts have been made at translating the world's most popular science fiction universe to computer games, with mixed success. (Oh, let's face it – most of them were awful.) The *Interactive Technical Manual* is the first *Star Trek* program to move away from the games-based approach. Instead it exploits the educational possibilities of CD-ROM, which not too long ago – when *Star Trek* was made, in fact – would in itself have been thought of as science fiction.

What you get are the blueprints of the Starship Enterprise – and the chance to find out exactly how the ship works and how its crew live.

Right from the beginning the *Technical Manual* recreates the feel of the fictional technology seen in the TV series. Starfleet logo and typeface adorn the screen while your Mac bleeps reassuringly at you in the manner of an Enterprise terminal. You're asked if you wish to see the guided tour or explore the ship on your own. Just click a button to make your selection.

The tour consists of a series of video clips narrated by Jonathan Frakes, who plays William T Riker in the programme. Here, as elsewhere, convenience is a priority: the entire set of clips will play through in sequence if left unattended, or you can click on any of the items in the contents list to go straight to that point. The *QuickTime* video clips used here are of above-average quality, and the narration indicates items to keep an eye out for.

The real fun starts when you explore. The exterior of the Enterprise is your first port of call. Here you can click on the picture and swivel it around, viewing the ship from any angle. A planet and satellite sweep past the ship as you do so.

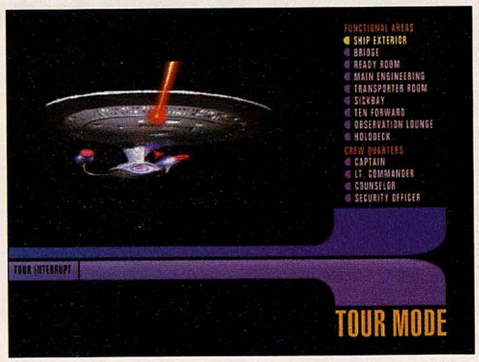
From here you can drop in on a number of rooms used by the crew, including the bridge and the transporter room, as well as four crew members' private quarters. You discover information on subjects as diverse as the mind-boggling warp-field space-travel theory and Lieutenant Data's pet cat, Spot.

The CD-ROM's title is a reminder that this product is biased toward technology. Many of the notes are scientific explanations of Starfleet machinery or the physics behind them. It's absolutely fascinating if you're into mechanics and science but will probably not be to everyone's taste. The notes are pepped up considerably by the use of schematic diagrams, which are often animated.

But it's the set that is the star of this CD-ROM. The next time somebody tries this *Star Trek* on CD idea, it would be nice to see some video clips of the crew, especially given the quality of the clips that have been used this time around. I'd even settle for a video of Spot if nothing else.

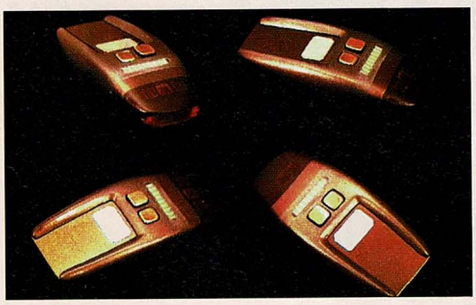
Each room is viewed through a small window, which uses Apple's *QuickTime* video system in an original way. By holding down the mouse button over the window and moving in any direction, you can look around the room. If you see something that catches your eye off to the right, you can head over there to take a closer look. There are limitations on where you can go, but the process still gives you enormous freedom to roam around and examine what you find.

The *Technical Manual* is the first program available that uses *QuickTime VR*. There's an ex-



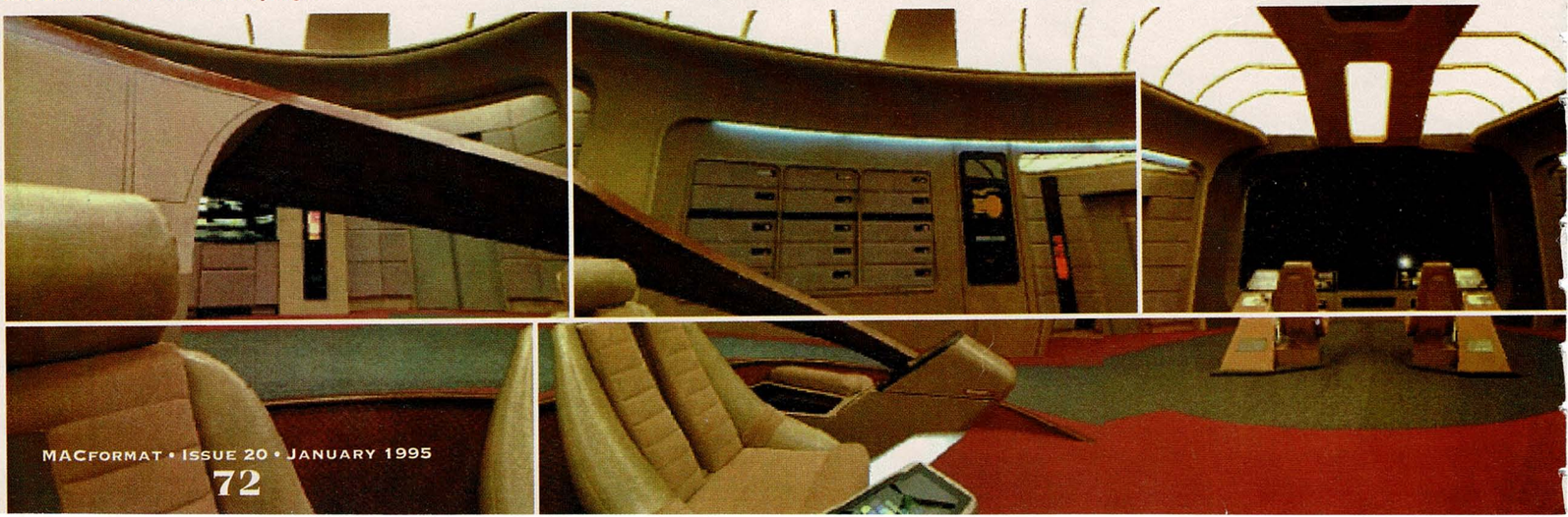
Video tours of all the sections are narrated by actor Jonathan Frakes (Riker) and feature some excellent footage.

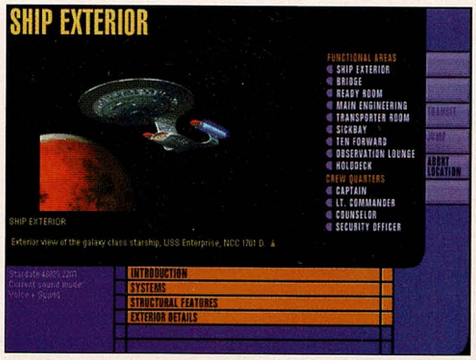
Engineering is the home of the fabulous neon-lit warp engines – you can discover exactly how they work.



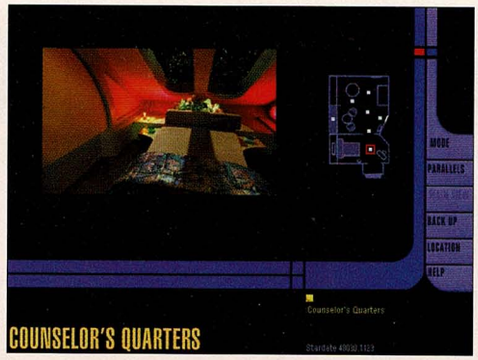
QuickTime VR enables you to grab hold of some objects and twist them around to view from any angle.

MACFORMAT Classic





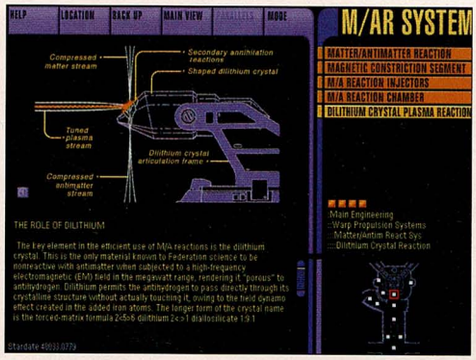
Look at the ship from anywhere you like, then find out how it was designed and built in the extensive notes.



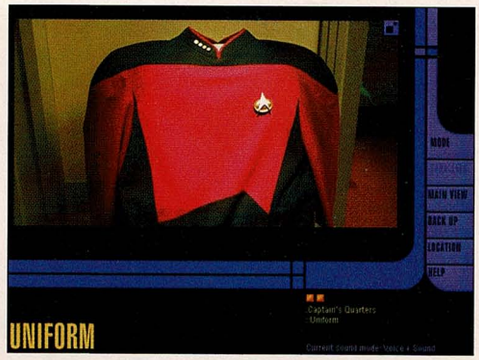
It's at moments like visiting Deanna Troi's bedchamber that you wish the *Technical Manual* included people.

This screen has four avenues of departure dotted around it, and other convenient exits are a mouse click away.

You'll know the transporter room's main function, but did you also know it houses banks of phaser weapons?



Complicated technical diagrams showing you how the technology works are often narrated and animated.



The famous captain's uniform, with its tunic specially made to be too small so that Patrick Stewart keeps tugging on it.

planation of how it all works on page 52, but all that really matters here is that it works beautifully. The movement as you look around each room is smooth and the picture is detailed. In fact, it forces me to say that it adds another dimension to *QuickTime*. A disadvantage is that it demands quite a powerful Mac and, more significantly, plenty of memory. You can switch off *QuickTime VR* and see still images of the rooms, but it's just not quite the same somehow.

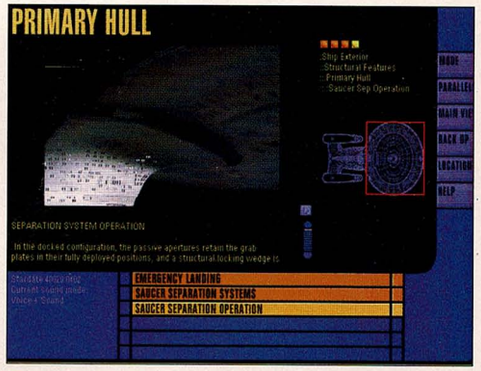
Look out for the demo on MACFORMAT's CD-ROM soon

Like most *QuickTime* footage these clips are not large, but the rest of the screen is used to offer a variety of path options to take you to other points in the manual. On a typical page you see a set of section headings called topic element bars. These offer detailed information on technical specifications and how the ship works. Each of these bars is treated as a layer, within which there are further layers. As you progress through them a second list develops. You can use this to go directly from the fourth layer to the second layer, for example.

In addition, there's a map of the room with viewpoints marked – click on one of these and you're whisked to that point, even if you're deep within a set of layers at the time. The main menu bar offers an option to call up the list of rooms at any time, or there's a full alphabetical index of rooms, topics and objects.

It's the way you can travel from one point of the manual to any other within three or four mouse clicks that makes the *Technical Manual* special. Its design means that you can easily follow a train of thought, or a spur-of-the-moment desire, across the entire breadth of information available.

Despite its lack of speed due to the amount of info it's dealing with, this product is one of the best uses of CD-ROM I've seen. No other medium could let you see the Enterprise the way this does. I can't wait to see the ideas of *QuickTime VR* and the excellent use of layered presentation applied to real life subjects – that really should be worth a look. *Richard Hill*



The workings of the ship are shown in crisp video, no detail spared. Here, for example, you can see how the living quarters are programmed to break away in emergencies to be rescued by the Federation. Watch this space.

STAR TREK MANUAL

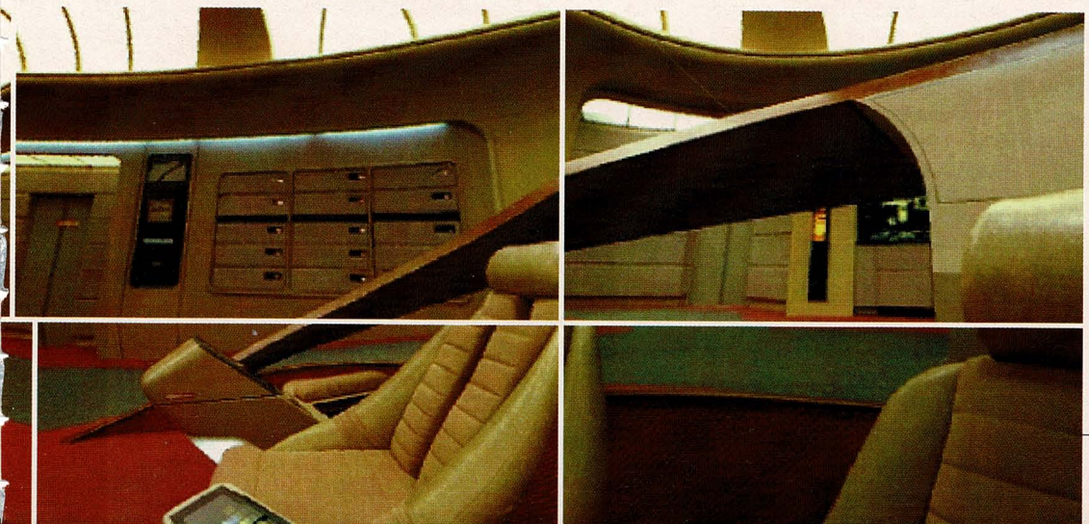
Price: £44.95. Out: now.
Requires: LCIII or better, System 7.0.1 or later, 5Mb of RAM (8Mb recommended for *QuickTime VR*) and a double-speed CD-ROM drive.
For more details contact ABLAC Learning Works on 0626 332233.

Features 90%
Brimming over with fresh ideas.

Ease of use 93%
Superb use of layers to move easily around the ship.

Value for money 87%
Tonnes for *Star Trek* devotees – erm, maybe not for others.

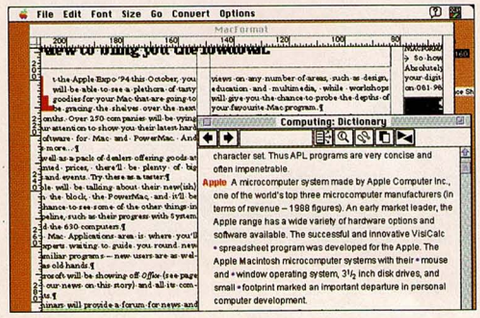
MACFORMAT RATING 92%



Oxford Reference Shelf

Perhaps the ultimate pocket dictionary – sixteen chunky volumes on a single CD-ROM. So now how are you going to fill the space on your bookshelf?

Where does CD-ROM belong in the media scheme of things? Sometimes a title is so much like a video you wonder why its creators bothered with a Mac at all. *Oxford Reference Shelf* lies at the other extreme – it's a set of books on a shiny disc. Fine. But why should we abandon the reassuring flick of pages in our dictionaries for this little bit of plastic?


File Edit Font Size Go Convert Options
Computing: Dictionary
Apple A microcomputer system made by Apple Computer Inc., one of the world's top three microcomputer manufacturers (in terms of revenue – 1988 figures). An early market leader, the Apple range has a wide variety of hardware options and software available. The successful and innovative VisiCalc • spreadsheet program was developed for the Apple. The Apple Macintosh microcomputer systems with their • mouse and • window operating system, 3½ inch disk drives, and small • footprint marked an important departure in personal computer development.

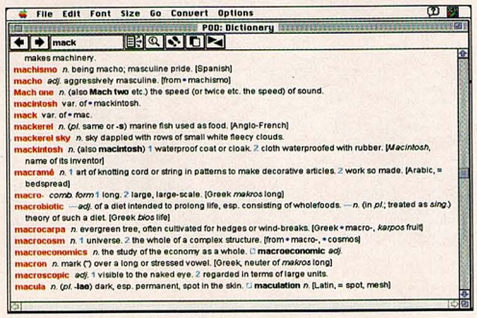
The *Dictionary Of Computing* is one of 16 books packed on to one CD-ROM – you can even have it open while you work.

There are many areas where we've already tossed aside the traditional in favour of the new, and writing is a good example. The common tools have changed from pen and paper to typewriters and now to the Mac, and the writing process has changed as well. The days of composing, of writing out several drafts in laborious longhand, are gone. The Mac now offers instant solutions – go back and change a sentence whenever you like, and the old version is gone forever.

The electronic dictionary has been around a while, but tends to be used as a backup to check your spelling in a dumb and fallible way – it won't notice if you type 'their' instead of 'there'. Meanwhile, serious reference material has remained on the bookshelf, drawing you away from your word processor to consult a thick volume to find the information you need.

ORS changes that. With one CD-ROM, you can check 16 dictionaries, from the *Pocket Oxford* to the *Dictionary Of Computing*, without rising from your seat. The text of each book is presented as a giant list that you can scroll up or down, and there are simple and effective cross-reference tools that enable you to follow a train of thought more quickly than you ever could have done with a book. *ORS* also remembers where you've been, enabling you to backtrack and go off on another tangent.

The text is contained in a window, so you can have it on-screen alongside your word processor or desktop publisher. A subtle touch is the way the text usually fits the size and

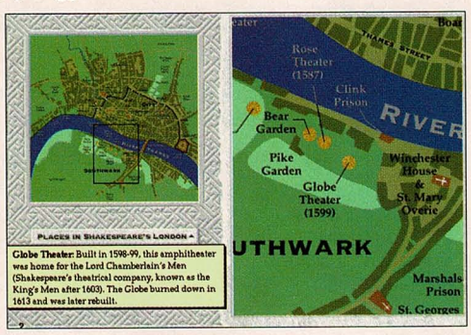

File Edit Font Size Go Convert Options
POD: Dictionary
mack
makes machinery.
machismo n. being macho; masculine pride. [Spanish]
macho adj. aggressively masculine. [from • machismo]
Mach one n. (also Mach two etc.) the speed (or twice etc. the speed) of sound.
macintosh var. of • mackintosh.
mack var. of • mac.
mackerel n. (pl. same or -s) marine fish used as food. [Anglo-French]
mackerel sky n. sky dappled with rows of small white fleecy clouds.
mackintosh n. (also macintosh) 1 waterproof coat or cloak. 2 cloth waterproofed with rubber. [Macintosh, name of its inventor]
macramé n. 1 art of knotting cord or string in patterns to make decorative articles. 2 work so made. [Arabic, = bedspread]
macro- comb. form 1 long. 2 large, large-scale. [Greek makros long]
macrobiotic —adj. of a diet intended to prolong life, esp. consisting of wholefoods. —n. (in pl.; treated as sing.) theory of such a diet. [Greek bios life]
macrocarpa n. evergreen tree, often cultivated for hedges or wind-breaks. [Greek • macro-, karpos fruit]
macrocosm n. 1 universe. 2 the whole of a complex structure. [from • macro-, • cosmos]
macroeconomics n. the study of the economy as a whole. □ macroeconomic adj.
macron n. mark (¯) over a long or stressed vowel. [Greek, neuter of makros long]
macroscopic adj. 1 visible to the naked eye. 2 regarded in terms of large units.
macula n. (pl. -lae) dark, esp. permanent, spot in the skin. □ maculation n. [Latin, = spot, mesh]

Click on a word in the listing, and you're taken to the entry for that word – or the nearest equivalent.

Macbeth

All hail MacIntosh! Shakespeare's tale of ambition, blood and magic reaches the CD-ROM.

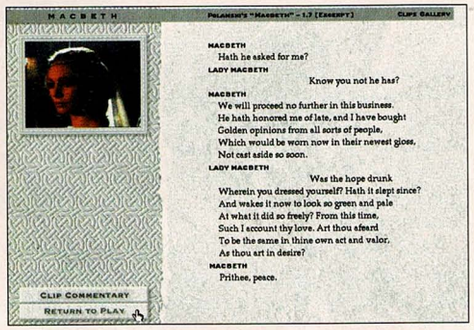
An austere box sets the tone for this guide to one of the Bard's best-known plays. It also trumpets a complete *QuickTime* video performance of the play, by the Royal Shakespeare Company – although what you get instead is a sheepish apology for its absence and the offer of a refund. Aye, there's the rub – what should have been an excellent piece of reference has emerged as a botched job.


Rose Theater (1587)
Clink Prison
Bear Garden
Pike Garden
Globe Theater (1599)
Winchester House
St. Mary Overie
Marshals Prison
St. Georges
PLACES IN SHAKESPEARE'S LONDON
Globe Theater: Built in 1598-99, this amphitheater was home for the Lord Chamberlain's Men (Shakespeare's theatrical company, known as the King's Men after 1603). The Globe burned down in 1613 and was later rebuilt.

Use the map of London to see where Shakespeare lived and worked – or view a map of Scotland showing the locations used in *Macbeth*.

The heart of the CD-ROM is a version of the complete script of *Macbeth*. Voyager acknowledges that these words were written to be delivered on stage rather than read, so it offers a soundtrack – the voices of actors, and some of the sound effects, that were supposed to have been accompanied by the missing video. Not surprisingly, perhaps, the compromise doesn't entirely work...

If Voyager had been forced into using only an audio production of the play, why couldn't it have hunted out one of the radio productions – something that worked without the need for pictures? Listening to what was, at


MACBETH
MACBETH
Hath he asked for me?
LADY MACBETH
Know you not he has?
MACBETH
We will proceed no further in this business.
He hath honored me of late, and I have bought
Golden opinions from all sorts of people,
Which would be worn now in their newest gloss,
Not cast aside so soon.
LADY MACBETH
Was the hope drunk
Wherein you dressed yourself? Hath it slept since?
And wakes it now to look so green and pale
At what it did so freely? From this time,
Such I account thy love. Art thou afeard
To be the same in thine own act and valor,
As thou art in desire?
MACBETH
Prithee, peace.
CLIP COMMENTARY
RETURN TO PLAY

You can view tiny *QuickTime* clips from Polanski's film of the play – and read his notes on how he interpreted it.

heart, a piece of theatre means this performance doesn't always make sense.

Video isn't entirely absent. There are a few excerpts from film adaptations by Roman Polanski, Orson Welles and the brilliant Japanese director Akira Kurosawa. There's also the Macbeth karaoke section, where you can read a part as your Mac plays opposite you. The two selected scenes include long monologues, so amateur thespians either have to work very hard or sit in the wings for ages doing nothing.

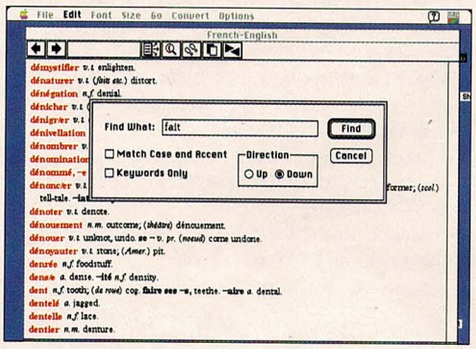
The part of the CD-ROM that does work well is the easily accessible reference material. This includes annotations on the plot and context of the play. Also instantly available are explanations of the words and phrases whose meanings have become clouded over the centuries. The advantage over study books, which offer similar background notes, is the way you can call up a definition or essay at any point,

shape of the window automatically, enabling you to read an entire entry without having to scroll along the line.

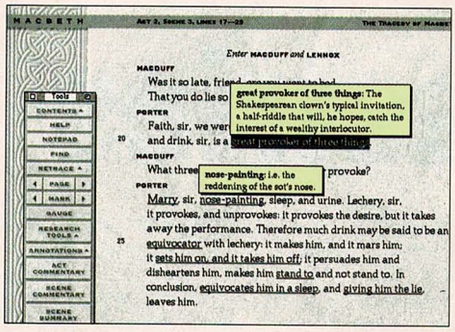
ORS is compelling evidence in support of the argument that CD-ROM is supplanting the book and becoming the definitive medium for reference works. *Richard Hill*

Price: £79.99. Out: now.
Requires: a Mac Classic or better, System 6.0.7 or higher, TrueType extension (included with System 7) and a CD-ROM drive.
For more details contact Oxford University Press on 0865 56767.

MACFORMAT RATING 88%


File Edit Font Size Go Convert Options
French-English
démystifier v.t. enlighten.
dénaturer v.t. (foie etc.) distort.
dénégation n.f. denial.
Find What: fait
Find
Match Case and Accent
Keywords Only
Direction
Up Down
Cancel
dénoter v.t. denote.
dénouement n.m. outcome; (théâtre) dénouement.
dénouer v.t. unknot, undo ⇔ v. pr. (noeud) come undone.
dénouter v.t. stone; (Amer.) pit.
denrée n.f. foodstuff.
dens⇔ a. dense. -ité n.f. density.
dent n.f. tooth; (de roue) cog. faire ses -s, teethe. -aire a. dental.
denté a. jagged.
dentelle n.f. lace.
dentier n.m. denture.

There's a simple search facility, while the footsteps icon enables you to trace back through the pages you've seen.


MACBETH
Act 2, Scene 3, Lines 17–29
The Tragedy of Macbeth
Enter MACDUFF and LENNOX
MACDUFF
Was it so late, friend, ere you went to bed
That you do lie so
great provoker of three things: The Shakespearean clown's typical invitation, a half-riddle that will, he hopes, catch the interest of a wealthy interlocutor.
PORTER
Faith, sir, we were
and drink, sir, is a great provoker of three things
MACDUFF
What three
nose-painting: i.e. the reddening of the sot's nose.
provoke?
PORTER
Marry, sir, nose-painting, sleep, and urine. Lechery, sir, it provokes, and unprovokes: it provokes the desire, but it takes away the performance. Therefore much drink may be said to be an equivocator with lechery: it makes him, and it mars him; it sets him on, and it takes him off; it persuades him and disheartens him, makes him stand to and not stand to. In conclusion, equivocates him in a sleep, and giving him the lie, leaves him.
Tools
CONTENTS
HELP
NOTEPAD
FIND
RETRACE
PAGE
MARK
GAUGE
RESEARCH TOOLS
ANNOTATIONS
ACT COMMENTARY
SCENE COMMENTARY
SCENE SUMMARY

As you listen to the dialogue, you can call up notes to explain Elizabethan terms and Shakespearian references.

keeping the text to hand as you read through the script. It's a more natural and integrated process than flicking through a book.

It's a shame that a reliable company like Voyager has chosen to put out this tragically flawed package, instead of taking the time to compensate for its visual deficiencies. It's by no means a bad product, but it could've been so much better. *Richard Hill*

Price: £51.70. Out: now.
Requires: a Mac IIci or better with at least a 13-inch colour monitor, System 7, 8Mb of RAM and a CD-ROM drive.
For more details contact Softline on 081 401 1234.

MACFORMAT RATING 67%

Headcandy

Turn on and tune in as psychedelia meets ambient music in Brian Eno's video extravaganza.

The thought of an experimental CD-ROM created by icons of the 1970s progressive rock scene would normally be enough to make me retreat into the embrace of some trashy pop music, but let's give it a chance. *Headcandy* is five pieces of music by Brian Eno, with assistance from Robert Fripp, plus accompanying visuals from the people who were behind the David Bowie-inspired *Jump*.

The music noodles around amiably in an ambient techno-groove, but the video is in-your-face from the word go. Swirling, flickering and shimmering along with the beat, the pulsating screen brands hypnotic patterns into your brain. To get the full effect, you should don a pair of the glasses supplied. This splinters the on-screen image into many fragments that hang in the air around the monitor, making a true kaleidoscope. It's cosmic.

Free your mind and your Mac will follow: a selection of head-expanding animation from *Headcandy*.

A major problem, on our Macs at least, was that even something as powerful as a Quadra 700 had trouble consistently displaying a smooth flow of images, almost juddering to a complete halt at times. This is despite time-eating extensions like AppleTalk networking and virtual memory being turned off. At least the PowerMac 7100 was equal to the task – but the need for such a powerful set-up limits the potential audience for the time being.

The publisher, Ion, seems unsure whether *Headcandy* is Serious Art or Wacky Novelty. Despite the efforts to establish credibility through the detailing of Eno's career (he produced Talking Heads and allegedly invented ambient music), you get the impression that the CD-ROM is destined to be tried once, then forever dragged out at parties that just don't know when to quit.

One question remains – why is this on CD-ROM? The animation is simply presented using *QuickTime* video, which means that it could have been placed on video tape just as readily. A positive note is that the publisher has recognised this in its pricing of the CD-ROM. So *Headcandy* might be worth a try if you like the idea and have a powerful enough machine. Still, the Mac is supposed to be about interaction, not mere observation. *Richard Hill*

Price: £19.99
Out: now.
Requires: A Quadra or PowerMac with a monitor that can show 256 colours, System 7.1 or higher, 8Mb of RAM and a double-speed CD-ROM drive.
For more details contact BMG Interactive on 071 973 0011.

MACFORMAT RATING 60%

Four Paws of Crab

Four Paws uses photography and illustrations at every opportunity to show the world behind the recipes – in this case literally.

STIR FRIED NOODLES W/OYSTER SAUCE
WON SEN PHAT NAM-MAN HOI
Noodle House
SOME DISHES, LIKE NOODLES AND FRIED RICE, ARE EATEN UNACCOMPANIED BY CURRIES, SOUPS OR SALADS. THESE ARE GENERALLY BREAKFAST, LUNCH OR LATE NIGHT SNACK FOODS. THERE ARE STALLS ON THE SIDE OF THE ROAD THAT SELL THESE DISHES FROM EARLY MORNING UNTIL 2 OR 3 AM. THERE ARE OFTEN TABLES SET UP OUT FRONT TO EAT AT, OR YOU CAN GET YOUR NOODLES TO GO, WRAPPED IN A BANANA LEAF.
ON ITS OWN, THIS DISH SERVES 3.
INGREDIENTS:
1/4 LB DRIED GLASS NOODLES (ALSO CALLED CELLOPHANE OR MUNG BEAN NOODLES)
10 BLACK OR OYSTER MUSHROOMS, HALVED
3 TBS. VEGETABLE OIL
1 TSP. GARLIC, FINELY CHOPPED
4-6 OZ PORK LOIN, SLICED INTO BITE-SIZED PIECES
1 TSP. SUGAR
1 TBS. FISH SAUCE
1 TBS. OYSTER SAUCE
1 TSP. WHITE PEPPER, GROUND
1/4 CUP OF WATER
1 BUNCH CILANTRO, CHOPPED INTO 2" PIECES
1/4 CUP CHINESE CELERY OR ITALIAN PARSLEY
STOP
DEMO

The exotic flavours of Thailand are evoked in this CD-ROM from the United States.

Lilting jazz music greets you as *Four Paws* opens, setting the tone for a quirky look at Thai cuisine and the country's culture as a whole. Despite its label of 'cookbook', recipes form just one tile in this CD-ROM's mosaic of features. The aim seems to be to introduce you to the people and ideas that created the food, as well as the spice-rich, garlic-laced food itself.

A selection of recipes drawn from across Thailand forms the core of the disc. All of them are presented with background notes explaining the origin of the meal or when and where it's eaten. There are occasional video demonstrations of cookery techniques, but nothing too tricky. The recipes are simple enough – the key lies in combining the ingredients so as to get the best possible flavours.

The design and feel of *Four Paws* is as appetising as its food. There is a generous use of photography, and the disc is packed with people and information on how they live. One section relates the tale of a cultural exchange between an American and a Thai, offering you the chance to see both Western and Oriental cultures through new eyes. Even the reference section – a simple parade of ingredients – is presented with flair. Pictures of market life are dropped in between pages to add even further to the atmosphere.

The design works well. The sections are arranged logically, giving you the ease of use of a book without the linear format and static design that you get with the printed word.

Like its recipes *Four Paws* takes a few simple ingredients and adds a pinch of imagination to create a far more satisfying dish. *Richard Hill*

Price: $49.95. Out: now.
Requires: any Mac, a colour monitor, System 7.01 or higher, 4Mb of RAM and a CD-ROM drive.
For more details contact Live Oak Multimedia on 0101 510 654 7480.

MACFORMAT RATING 85%

Demos of both these programs are on this month's CD-ROM

The art of Making Great Pastries

Mmmm... Cakes and cream-filled delicacies. Salivate over them and learn how to make them. But keep the sugar and flour off the keyboard...

Making Great Pastries takes the traditional cookery book, with its recipes and instructional features, into the realm of the CD-ROM. Yes, folks, we're way out in Delia Smith Country – in the land of Platonically ideal pastries and cakes as light as scented air.

Pâte Feuilletée
Ing
Tools
Show Recipes
Make a paste: sift the flour onto a workspace. Make a well in the center and add the salt and water. Dissolve the salt into the water with your fingers and gradually mix in the flour. Work the dough quickly with your hands, holding it as little as possible. If necessary, add a little more water at this stage. Press the dough into a ball, dust it lightly with flour, and cut a cross about 2/3 inch/ 2 cm deep on the surface. This stops expansion and allows the dough to relax. Wrap in a plastic bag and refrigerate for 20 to 30 minutes.
HELP BACK MAIN QUIT

The most successful part of the disc is the video workshop on preparing complex pastries and creams. Yum.

Even the box is worth a special mention – it's completely over the top, a giant hardback book-style affair with a fondant, swirling colour scheme. It's a pity this delicious packaging is let down by the unattractive design and photography of the electronic pages. The photos in particular are often poorly lit, making the food look pretty unappetising.

Once you have chosen your recipe, you get a screen that shows the end result along with its preparation time. You can then go to a step-by-step guide to creating your own masterpiece. There are also pages that show in more detail how to hand-make some of the complicated ingredients, such as the various sorts of pastry. A sequence of pictures show the basic technique, and you can click on any picture to view video instructions.

The video clips are brief, and tightly edited, and succeed in communicating essential information economically. It's a shame there's no facility for watching the entire set of clips without having to click on every stage. Even more disappointing is the absence of *QuickTime* – the publisher should not assume that you own the correct version already.

Familiar and conservatively chosen classical music plays as you browse through the CD-ROM. When a page changes, the music cuts out abruptly and starts from the beginning – this could and should have been avoided.

Making Great Pastries is like a cake that's risen well in the oven, only to sink in the middle when it's taken out. Try it, sure, but you won't want seconds. *Richard Hill*

Price: £39.95. Out: now.
Requires: LCIII or better, System 7, 6Mb of RAM (8Mb recommended) and *QuickTime* 1.5 or later.
For more details contact Gem Distribution on 0279 412441.

MACFORMAT RATING 57%

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Power Mac 8100/80 16/500 AV CD	3165	Power Mac 6100/60 8/160 & SW	1506
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Power Mac 7100/66 8/250 & SW	2020	Power Mac 7100/66 8/350 & SW	2485
Power Mac 7100/66 8/500 CD & SW	2361	Power Mac 7100/66 8/500 AV CD & SW	2482
Power Mac 8100/80 8/250 & SW	2730	Power Mac 8100/80 8/500 & SW	2940
Power Mac 8100/80 16/500 CD & SW	3150	Power Mac 8100/80 16/1000 CD & SW	3465
Power Mac 8100/80 16/500 AV CD & SW	3270	Power Mac PDS Upgrade Card	545

Key: AV = Audio Visual, SW = Soft Windows

Power Macintosh Bundles

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7100/66 8/500 AV CD with Quark XPress 3.3	2394	8100/80 16/500 CD with Quark XPress 3.3	3307
8100/80 16/500 AV CD with Quark XPress 3.3	3428	8100/80 16/1000 with Quark XPress 3.3	3622

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Powerbook 520	4	160	50/25Mhz LC040	9.5" 16 GS PM	1435
Powerbook 520C	4	160	50/25Mhz LC040	9.5" 256 Col PM	1843
Powerbook 540	4	240	66/33Mhz LC040	9.5" 64 GS AM	2010
Powerbook 540 EM	12	240	66/33Mhz LC040	9.5" 64 GS AM	2445
Powerbook 540C	4	320	66/33Mhz LC040	9.5" 256 or Thou Col AM	3013
Powerbook 540C EM	12	320	66/33Mhz LC040	9.5" 256 or Thou Col AM	3499
Powerbook Duo 230	4	120	33Mhz LC040	9" 16GS	830
Powerbook Duo 280	4	200	66/33Mhz LC040	9" 16GS AM	1674
Powerbook Duo 280 EM	12	200	66/33Mhz LC040	9" 16GS AM	2010
Powerbook Duo 280C	4	320	66/33Mhz LC040	8.4" 256 or Thou Col AM	2341
Powerbook Duo 280C EM	12	320	66/33Mhz LC040	8.4" 256 or Thou Col AM	2677
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Key: EM = Express Modem, GS = Greyscale, PM = Passive Matrix, Col = Colours, AM = Active Matrix, Thou = Thousands

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Performa 475 4/160 & keyboard	604	Performa 475 4/250 & keyboard	625
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Performa 630 4/250 & keyboard	782	Performa 630 8/250 CD & keyboard	982
Performa 630 8/250 CD Plus & keyboard	1024	LC 475 8/250 & keyboard	656
LC 630 8/250 & keyboard	813	LC 630 8/350 CD & keyboard	939

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Performa 460 4/160 Plus	4	160	with 14" display & keyboard	730
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Performa 475 4/250	4	250	with 14" display & keyboard	782
Performa 475 4/250 Plus	4	250	with 14" display & keyboard	810
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Performa 630 4/250	4	250	with Colour Multiscan 15" display & keyboard	1011
Performa 630 8/250 CD	8	250	with Colour Multiscan 15" display & keyboard	1173
Performa 630 8/250 CD Plus	8	250	with Colour Multiscan 15" display & keyboard	1217
Performa 630 8/350 CD	8	350	with V-in-TV, Colour Multiscan 15" display & keyboard	1336
Performa 630 8/350 CD Plus	8	350	with V-in-TV, Colour Multiscan 15" display & keyboard	1378
LC 475 8/250	8	250	with Colour 14" display & keyboard	861
LC 630 8/250	8	250	with Colour 14" display & keyboard	966
LC 630 8/350 CD	8	350	with Colour 14" display & keyboard	1097
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32Mb	916		
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8Mb	231	10Mb	307
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4Mb	152	8Mb	285
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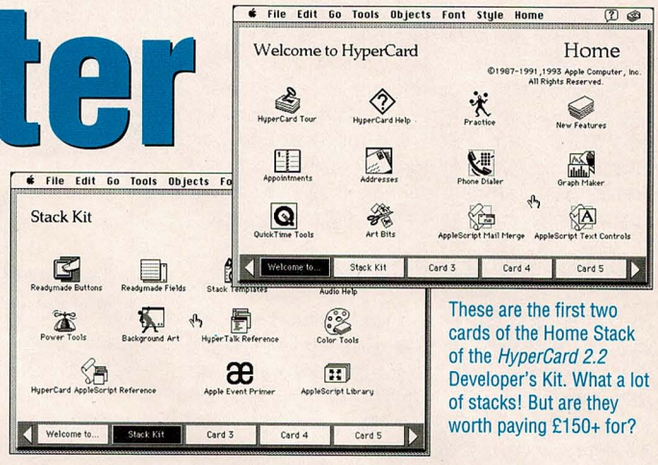
PUBLIC APOLOGY

M.D. OFFICE SUPPLIES WOULD LIKE TO TAKE THIS OPPORTUNITY TO APOLOGISE TO ALL ITS COMPETITORS IN THIS MAGAZINE, AS EVER WE SHALL BE OFFERING OUR SUPERB RANGE OF MAC ACCESSORIES AT UNBELIEVABLY LOW, LOW PRICES. YOU CANNOT BUY BETTER OR CHEAPER.

Stacks better

So you got *HyperCard* free with your Mac. Is it worth paying an extra £150 to upgrade to the all-singing, all-dancing Developer's Kit? Rod Lawton says yes...



These are the first two cards of the Home Stack of the *HyperCard 2.2* Developer's Kit. What a lot of stacks! But are they worth paying £150+ for?

Since the start of this *HyperCard* series I've been concentrating on *HyperCard 2.0*, even though *HyperCard* is now at version 2.2. Why? Because all the features of 2.0 will work with later versions. And version 2.0 was given away free with Macs until a couple of years ago, so it's a safe bet to assume that most people have that version.

Version 2.0 is capable of just about everything that later versions are. Most importantly, it contains the HyperTalk scripting language and there have been few significant changes to this in later versions. So if you do have version 2.0, there's not a lot to be gained from shelling out the £150+ for *HyperCard 2.2*. Or is there?

New, improved HyperCard

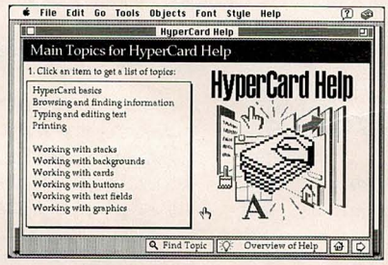
What you do get when you buy a copy of *HyperCard 2.2* is not a vast improvement to the original software, but loads of other tools and stacks to make your own stacks more powerful, more attractive and, generally, easier to build.

The free version of *HyperCard* came with the application, a Home Stack, and a couple of sample stacks that stored names, addresses and appointments. Plus some extremely basic documentation that only gave a glimpse of what *HyperCard* could do. It hardly made reference to the fact that it had its own programming language. You could begin to make progress with it only after weeks of experimentation, lots of reference books and some major intuitive leaps.

It's not that the software wasn't powerful, it's just that you couldn't find out anything about it. I tried to buy the full *HyperCard* application soon after I got my Mac, but my dealer told me I didn't really need the reference books that came with it – *HyperCard* was, he said, more or less self-explanatory. Then he told me the password that turned the demo version of 2.0 into the full-blown application. Good news if you're short of cash. Not so good if you're short of information...

Apple has taken a couple of different routes in marketing *HyperCard*. In the early days it wanted everyone who had a Mac to have *HyperCard* too, but because *HyperCard's* so versatile it's never been an easy application to explain. And it's tough to sell a product you can't describe.

Nowadays *HyperCard* comes in two forms. The free form is the *HyperCard* player, which turns up with other applications or reference media – the player enables you to use *HyperCard* stacks but not edit them. The other form, which certainly isn't free, is the Developer's Kit. This costs £150+, from authorised Apple dealers. It comes with enough additional stacks, tools, and reference information to take up 11 disks in version 2.2. *HyperCard* is much the same as it always was, so what's all this other stuff?



This is the Help Stack's front end. It isn't especially elegant but it is efficient at pointing you towards the information that you need.

Stacks of help

If you got *HyperCard* free with your Mac, you have been short of one essential commodity – reference material. When you buy the complete Developer's Kit you get lots.

HyperCard is purpose-built for creating interactive reference documents, so it makes sense that its own documentation should be in the form of *HyperCard* stacks.

What's more, these stacks can demonstrate features with animations and diagrams. Add sophisticated navigational controls and keyword searches, and you've got something that's alive, rather than just words printed in a book.

HyperCard Tour is a simple reference stack which tells you what *HyperCard* is, what it can do, and how you use it. It can't open your eyes to everything the program can do, but at least it starts you thinking.

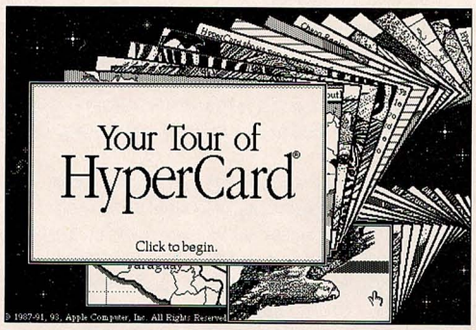
This stack also demonstrates the basic *HyperCard* stuff like fields, buttons, cards, backgrounds etc, and how they all interrelate. These are not the easiest things to explain on paper but once you've seen an animated demo they suddenly become crystal clear.

HyperCard Help answers the kind of questions that you come up with when you're in the middle of creating a stack. How do you set the default text style for a field? How do button families work? How do you resize a stack? Just call up the *HyperCard* Help Stack and it will open in another window on screen.

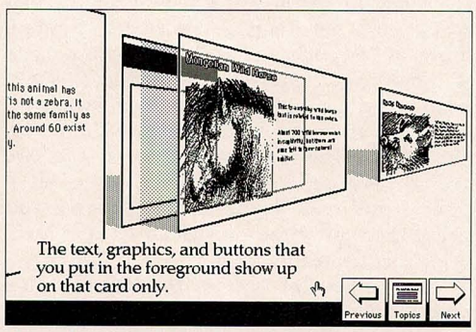
The Help Stack is arranged to enable you to zero in on the information you need as quickly as possible. And once you find the information you need, you can look up related subjects, special tips and trouble-shooting guides.

HyperTalk Reference is similar to the Help Stack, except it's a guide to HyperTalk rather than a guide to *HyperCard* objects. HyperTalk might be one of the most friendly programming languages ever written, but it's also powerful. This means there are many commands, functions and properties that need explaining.

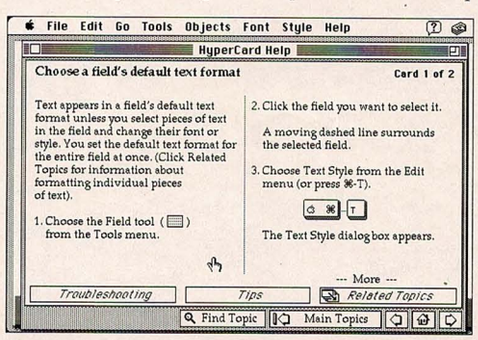
This stack provides an on-line reference. It's not perfect but is a whole lot better than nothing. All the same, there's something vaguely disquieting about both the Help and HyperTalk Stacks. If you bought 2.2 you will not only



Beginners start here! This stack gives a friendly, animated introduction to *HyperCard* – what it is and what it can do.


this animal has
is not a zebra. It
the same family as
Around 60 exist
y.
The text, graphics, and buttons that you put in the foreground show up on that card only.
Previous
Topics
Next

Want to know the difference between the card layer and the background layer? This sequences explains it simply.


File Edit Go Tools Objects Font Style Help
HyperCard Help
Choose a field's default text format
Card 1 of 2
Text appears in a field's default text format unless you select pieces of text in the field and change their font or style. You set the default text format for the entire field at once. (Click Related Topics for information about formatting individual pieces of text).
1. Choose the Field tool ( ) from the Tools menu.
2. Click the field you want to select it.
A moving dashed line surrounds the selected field.
3. Choose Text Style from the Edit menu (or press ⌘-T).
The Text Style dialog box appears.
--- More ---
Troubleshooting
Tips
Related Topics
Find Topic
Main Topics

Want to change a field's default text format? This is one of many clear walk-throughs in the Help Stack.

have both these stacks, you will also have the equivalent paperback manuals. And it's these I always turn to first...

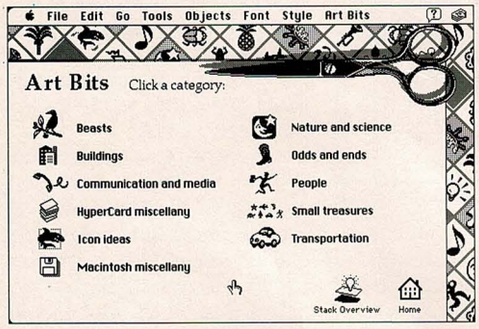
The trouble with stacks as reference works is one of orientation. At any one time, where are you? There's no obvious beginning or end, and there's little way of telling where you are in the hierarchy of information. Books may be linear and unreactive, but you know where you are.

Keeping up appearances

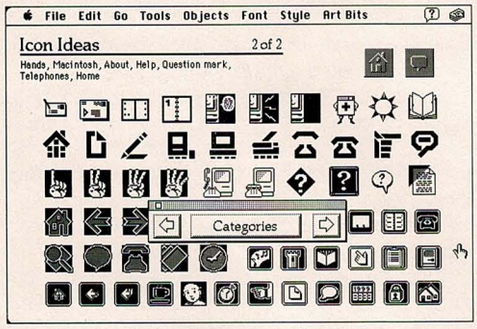
HyperCard has its own built-in painting tools and can also import mono bitmapped images. Even on a Mac with 24-bit graphics, cards will still only display in one-bit mono. There are tools for colourising your stacks, and *HyperCard 2.2* comes with these. But it's not the same, as we shall see later.

Anyway, that's by the by. *HyperCard* can display mono graphics, and careful use of graphics makes your stacks look much, much better. You can either create them yourself or import them. The trouble is, designing effective mono graphics is harder than you might think, and finding them elsewhere is harder still.

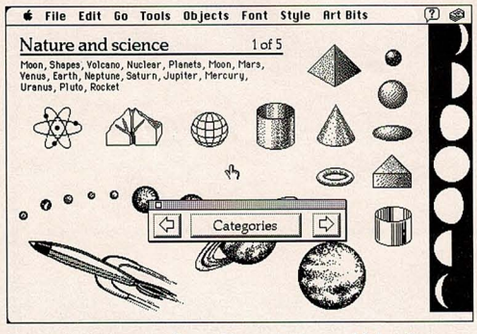
Fortunately the Developer's Kit comes with



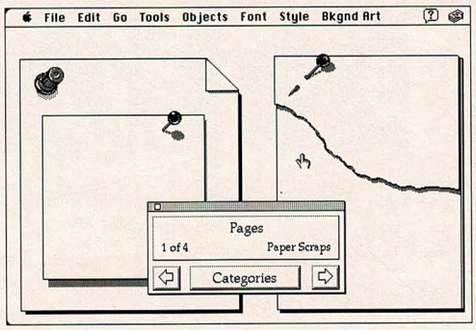
Need a bit of clip-art to liven up your stack? You might find just the illustration you need under one of these categories.


File Edit Go Tools Objects Font Style Art Bits
Icon Ideas
2 of 2
Hands, Macintosh, About, Help, Question mark, Telephones, Home
Categories

HyperCard comes with dozens of standard icons. Here are some more, courtesy of the Art Bits clip-art stack.


File Edit Go Tools Objects Font Style Art Bits
Nature and science
1 of 5
Moon, Shapes, Volcano, Nuclear, Planets, Moon, Mars, Venus, Earth, Neptune, Saturn, Jupiter, Mercury, Uranus, Pluto, Rocket
Categories

This isn't the largest clip-art library in the world, but there are still many useful graphics covering a wide range of subjects.



If you're creating a stack for making notes, you can reinforce the concept by making it look like a notepad.

an extremely useful stack containing clip-art which you can select, copy and paste on to your own backgrounds and cards. It includes many things, from animals to buildings, from icon ideas to modes of transport.

There's also a stack containing sample background graphics. You can find patterned backgrounds, model notepads and index cards and a selection of decorative borders to improve the appearance of your stacks.

DIY ain't hard to do

With a bit of HyperTalk know-how it's possible to create some very clever buttons, fields and stacks. With the full Developer's Kit, you might find that the work has been done for you.

Ready-made Buttons are are prime example. You click on *HyperCard* buttons to make things happen. Exactly what happens depends on the script you write to go with the button. But there are certain button scripts you find yourself writing over and over again because they represent simple, basic, useful functions.

And there are other equally useful scripts that take an age to work out and write. Both types are represented here. Using these buttons is simplicity itself. Find the button you want, copy it and paste it into your own stack.

The button scripts have all been written so they'll work wherever you put them – this means they contain some pretty impenetrable and complex code, so don't be surprised if you can't make sense of them or if there are quicker ways of writing them for your specific stack.

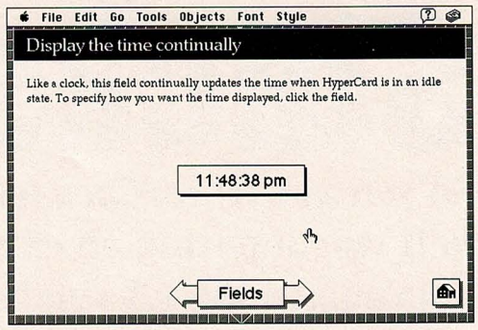
If anything, Ready-made Fields are even more useful than the Ready-made Buttons provided. They can do anything from displaying the current time continuously to indexing all the cards in your stack.

They all use standard HyperTalk routines, and they could all be written by competent HyperTalk programmers. But why should you spend time re-inventing the wheel? Besides, browsing through this and the Ready-made Buttons Stack can give you fresh ideas about what is and is not possible with *HyperCard*.

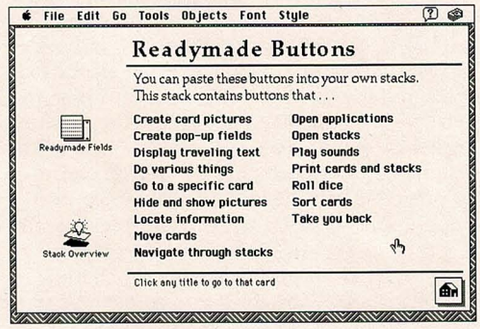
Finally, there are some Ready-made Stacks. This stack offers more than a dozen template stacks. Click on a stack description to see a sample card and, if you decide it's what you need, then go ahead and create a new stack using that template.

Don't forget that, because *HyperCard*'s such a versatile tool, you can modify and redefine your stacks so that they'll do exactly what *you* want them to do.

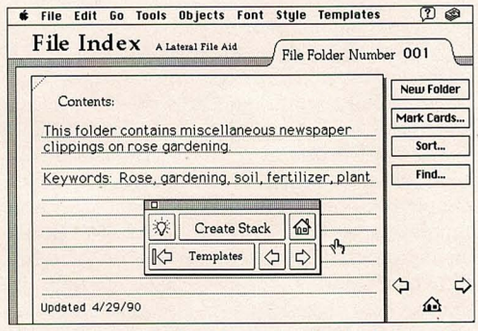
Rod Lawton


File Edit Go Tools Objects Font Style
Display the time continually
Like a clock, this field continually updates the time when HyperCard is in an idle state. To specify how you want the time displayed, click the field.
11:48:38 pm
Fields

Fancy having the time displayed continuously? Simply copy this field and paste it into your own stack.



You can write scripts to make buttons do all of these things – but what's the point of re-inventing the wheel when someone else has already done all the work?



If you want a standard flat-file database, here's the template for you. Just click on the button to create your new stack.

NEXT MONTH

We've mentioned some of the special stacks you get with the full *HyperCard* Developer's Kit. They're the easy ones. They don't offer anything you couldn't write yourself, but they do make stack creation a great deal easier – and they can give you lots of ideas.

But there are other stacks provided with the Developer's Kit that add new commands and features. They do this via XCMDs (eXternal CoMmanDs) which can be installed and used within your own stacks.

With these stacks you can create your own custom palettes, add colour to your stacks, incorporate *QuickTime* movies and even – via Apple's emerging *AppleScript* technology – control other applications and files. We'll be looking at some of these powerful new tools next time...

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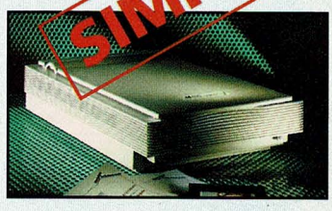

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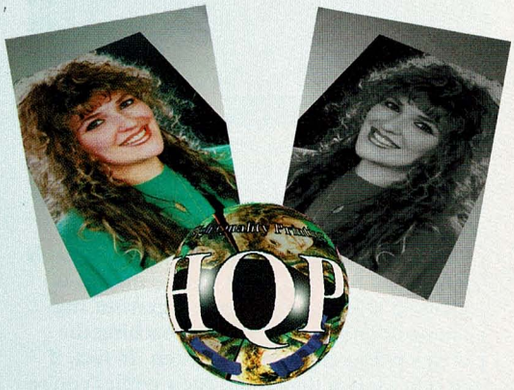

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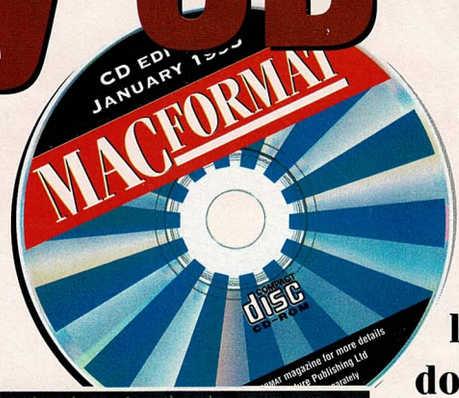
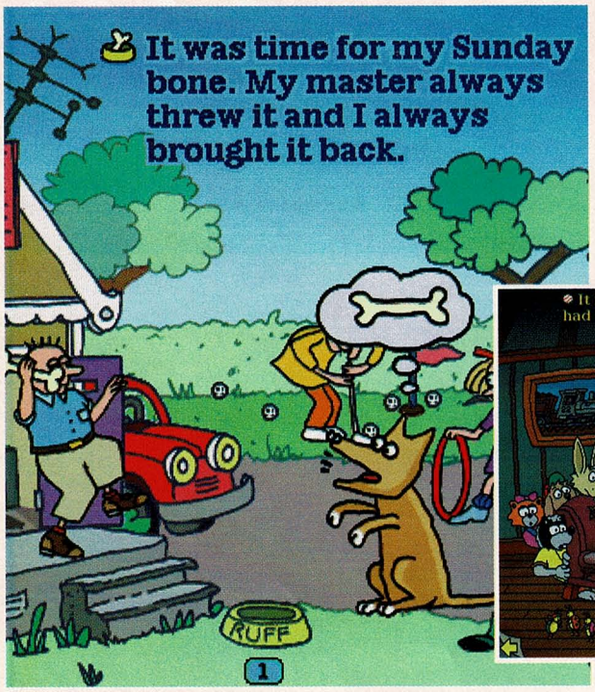
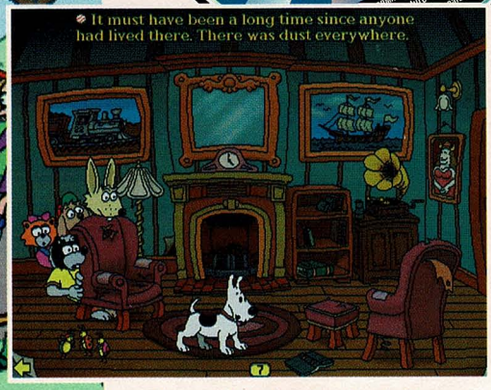


Teaching your children to read with their favourite story on CD-ROM sounds like a good idea, but does it really work?



Why *do* dog owners always throw things for their dogs to fetch?



Harry and friends enter a haunted house – as you do – in search of their lost ball.

Few people would argue with the fact that teaching children how to read is one of the most important parts of their education. But learning how to decode letters on a page is not the end of the story – self-motivated, enthusiastic and discriminating readers have more chance of success at school than those who regard reading as a chore. So it's good to see that more and more decent titles are being released on CD-ROM, providing rich reading resources and teaching children the important lesson that reading is not just about print, nor is it a passive activity.

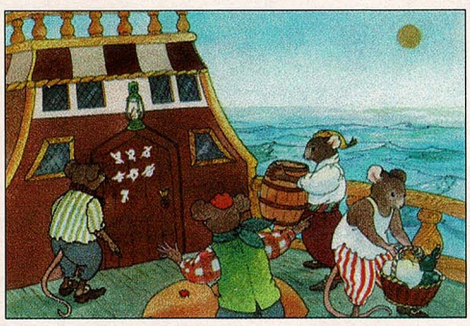
Reading and re-reading favourite stories with a parent is an extremely potent way of helping

THE TREASURE HUNT

A slightly different approach is adopted by this CD-ROM. *Treasure Hunt* is Omnimedia's first venture into children's publishing (previously it's been confined to music and video CDs) and is aimed at four to nine year olds. A print version of the book is not included in the package, making it clear that the CD-ROM is seen as a stand alone reading activity.

MACFORMAT Classic

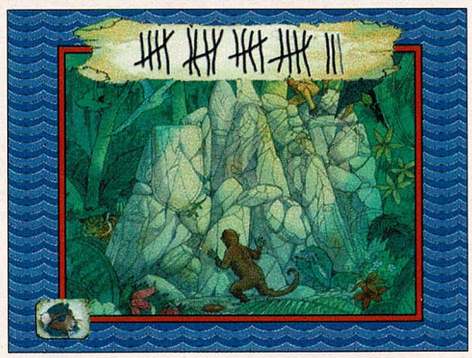
The story concerns a group of pirates (all mice, of course) who set out in their ship to find treasure, using a map they've found. They follow the map and a number of clues, finding and then travelling around an island until they eventually dig up the treasure. On the way, you have to solve a number of puzzles to enable the band of mice to continue – finding your way through a maze or seeing objects hidden in a rock, for instance.



They're not deciding on a house number or playing bingo – these pirates have been at sea for seven days.

The story is based on an original book by Amanda Wood and is gorgeously illustrated by Maggie Downer. The pictures have been animated and the puzzles adapted to be more appropriate for interactive use, and there's music to accompany the telling of the story – it sounded wonderful on my 660av. You can listen to the story in its entirety, or select one chapter at a time to read or just play with the puzzles. For variety you can choose to hide the words, if you wish. The story and the graphics provide plenty to talk about and the puzzles are a good opportunity for some joint problem-solving with your child. I found it great fun to play with.

A unique feature of the CD-ROM is the ability to set it in Bedtime Story mode. How many times has your child asked to listen to a story tape while he or she falls asleep? And how many times have you been summoned upstairs to rewind the tape? With this program the story will be told and re-told at decreasing volumes until it quits and returns to the desktop, leaving your child sleeping peacefully, angelically even. Well, that's the theory behind it all, anyway. Whether or not it'll work remains to be seen.



Like the dolphins etc in those squiggly-patterned arty pictures, there are objects hidden in this rock. Apparently.

Some of the puzzles may be a little difficult for unaided four year-olds, so the materials packaged with the disc contain general suggestions for parents about approaching the puzzles with very young children. In fact, if you don't touch the mouse for a while, you're rewarded with some clues. This, in the words of Martin Koronka of Omnimedia, is to 'Calm it down a bit and act as an antidote to the mouse-heavy zapping of arcade games.'

As a teacher, my only criticism of this package is that it doesn't involve the child in the story as fully as the Brøderbund titles do,

to turn children into self-motivated and keen readers. Typically, when reading a book together, the words will be read out loud and both parent and child will point at the pictures and talk about what they see. They'll talk about the story and its characters and relate them to their everyday lives. No matter how many times a book is read, each re-reading is an opportunity for the child to rediscover the story, to relive the experience as if it were the first time. Most good children's books can be read again like this because there's always something new to see or to talk about.

The Brøderbund approach

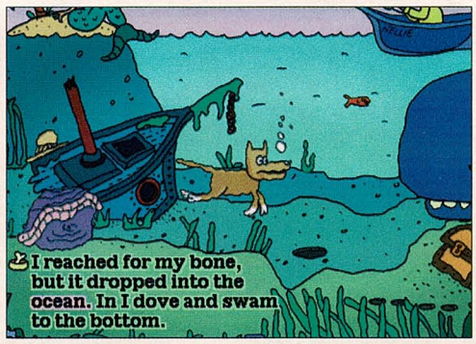
That's why there were some fears expressed by teachers about the Brøderbund approach in the early days. In case you have just woken from a deep sleep that's lasted two years, the Living Books series is a set of interactive books on screen. Each title works the same way – you hear the story read (in American English) and the actions conveyed in the words are appropriately animated. Once a page has been read, you can point and click at objects on the screen and be rewarded with an amusing animation. In a sense, these 'extra' animations could be seen as replacing the meanings and ideas beyond the words that young readers find in a print-based book.

However, Brøderbund's decision to include a print copy of each book with the CD-ROM shows an awareness of the fact that part of being a reader is being able to make choices between media for reading. With CD-ROM books there's still a great deal to talk about, and each session with the CD-ROM can stimulate new ideas and discussions about what happens. Young readers can be encouraged to talk about the strengths and weaknesses of each medium.

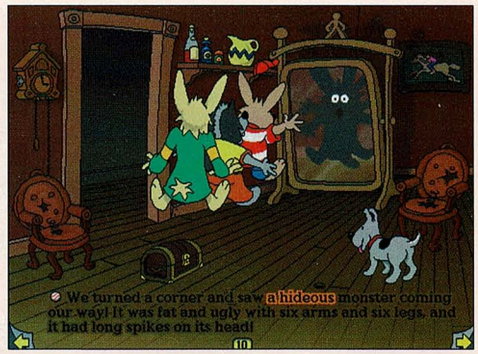
Ruff's Bone and *Harry's Haunted House* are the latest titles from Brøderbund in its Living Books series. Both of them have the high-quality graphics and animations that are becoming Brøderbund's trade mark, as well as interesting stories to boot. *Harry's Haunted House* has a new feature – the facility to play songs from the story. You can play it on an ordinary audio CD player using the CD-ROM disc.

RUFF'S BONE

Ruff's Bone, not surprisingly, is about Ruff, a dog who enjoys playing fetch with his Sunday bone. On this occasion Ruff's owner throws the bone and it lands in a hole in a neighbour's garden. The rest of the story concerns Ruff's adventures in finding it. The search for the bone takes him to a cave, to the bottom of the sea and to a planet in space. Like most good stories for children, it's great fun, has vivid pictures and provides plenty of opportunities for discussion between parent and child in a joint reading session. Here, for example, talking about the story can give rise to discussions about what it feels like to be under water or in space. This is great for encouraging children to explore new ideas about the world and their experience of it.



Ruff's search for his missing bone reaches new depths.


We turned a corner and saw a hideous monster coming our way! It was fat and ugly with six arms and six legs, and it had long spikes on its head!

The tension gets to Harry's mates, and as soon as they see a mirror – Yikes! – they're wide-eyed and witless.

HARRY AND THE HAUNTED HOUSE

Harry and the Haunted House concerns Harry D Rabbit and his friends who are playing baseball. And guess what? Harry hits the ball through a window in a neighbour's house. Unfortunately, the house is a scary mansion, reputed to be haunted. Without a thought about laws concerning breaking and entering, but with some fear of the supernatural, they decide to go into the house to find the ball.

As you can imagine, lots of scary things happen. However, there's a delicious tension between the words of the story and some of the animations that play when you point and click – the extra events really are supernatural, such as paintings that come to life and ghosts that appear in mirrors.

Discussion with a child about this story will inevitably lead to thoughts and conversation about what scares us and how real our fears are, as well as whether the gang really should have gone into the house without the owner's permission. A story with a moral, then.

There are some wonderfully witty animations in both stories, especially the beetles in *Harry and the Haunted House*. And both stories will keep children and parents happily involved for hours on end.

Phil Moore

and there's only ever one correct answer to each puzzle. I also wish that designers would give children the facility to record their own soundtracks for CD-ROM books so that they can re-tell the story in their very own words.

On the other hand, reading isn't always about being involved in the story. Sometimes it's just for fun and these CD-ROM titles should provide a lot of that.

THE TREASURE HUNT

Price: £41.12.
Requires: LCIII or better, 312k hard disk space, at least 4Mb of RAM and a colour monitor. Plus a double-speed CD-ROM drive (300k/s) or better.
For more details contact Omnimedia on 0181 974 6766.

Features Gorgeous graphics and perplexing puzzles.	92%
Ease of use Just point and click.	92%
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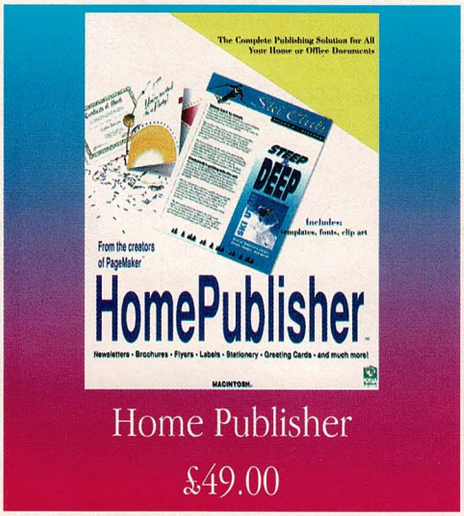
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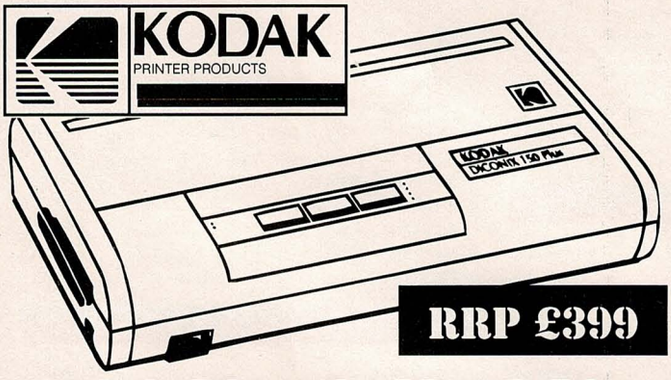

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Please note that we are unable to answer questions over the phone – so there's no point ringing us up with technical enquiries. We're also unable to enter into personal correspondence – even if you enclose an SAE.

Do-it-yourself problem solving

One of the main causes of a program not working properly is something called an INIT clash – this ominous-sounding term means your program isn't happy with one of the system-level Extensions (INITs in System 6) that are running.

Fortunately, it's easy to check if this is the case. First of all, restart your Mac without any System Extensions (INITs). If you're running System 7.0 or above, that means restarting the Mac and holding down the **[shift]** key – a message telling you **'Extensions Off'** will appear. For any System version below 7.0, move all the Control Panels and INITs out of your System Folder and restart the Mac.

If your program now works, it must have been unhappy with one or more of the INITs. The only way to work out which one is the culprit is to move them all out of the System Folder, then put them back in one at a time – not forgetting to restart your Mac after each one – and test the program again after each one has been replaced.

Once again MACFORMAT's team of experts have been busy sorting out your problems for you. Don't thank us, we do it for the challenge (honest). This month's answers come from Simon Cox, Jim Chandler and Derek Smith.

Bigger, better, more!

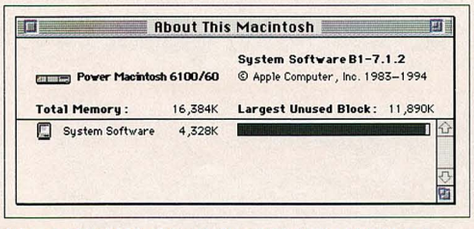
Q I need to open several programs at once such as Illustrator, Dimensions *and* Photoshop. *My LCIII does its best but I know I'm asking too much. I'm going to buy a PowerMac 6100 with 8Mb of RAM. Will I have my speed problems resolved and will I be able to run several programs at once?*

Ruí Araújo
Portugal

A A PowerMac 6100 will run your current software at about twice the speed of an LCIII. The reason it's *only* this much better is that the software will be running under emulation. That is, the PowerMac will be pretending it's an ordinary Mac. But the latest versions of many programs are available in native versions. This means they've been specially written for the PowerMac and will run much faster. *Photoshop 3.0*, for instance, is PowerMac native so speed is not a problem. It will cost you £851.88 from Principal Distribution, tel: 0706 832000.

But memory may well be a problem waiting to happen. The System software on our office PowerMac 6100 takes 4Mb of RAM with very few Extensions running. This is partly due to the 6100, which unlike any other Mac doesn't have any video RAM, but rather uses the ordinary RAM to drive the monitor. And when you install System 7.5 on your PowerMac, it'll use even more memory!

This will leave you with no more than 4Mb free, which will be inadequate to run two native graphic programs if you're serious about it. *RAMDoubler* is now available for the PowerMac, but you will lose some of the speed you just gained. It costs £82.19 from Computers Unlimited, tel: 081 200 8282. If you can afford it, go for 16Mb of memory. You're going to need it for System 8 and OpenDoc next year... *DS*



A PowerMac 6100 with very few extra Control Panels or Extensions still needs lots of memory to start up.

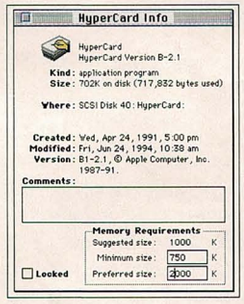
Remember the memory

Q Sometimes, when printing an Aldus SuperPaint *or* Print Shop Deluxe *document, and after several minutes of imaging, I get a screen message telling me there isn't enough memory to print whether printing is in background mode or not. I do have 8Mb of RAM.*

Ann Farr
British Consulate-General, Boston

A The problem here is that although you've got plenty of memory, your applications don't know they can use it. When you launch an application, it grabs a lump of memory for its own use. If it uses up all of this lump, it complains about being out of memory.

It's easy to fix, though. Click once on the application's icon in the Finder, and then choose **Get Info** from the **File** menu. A box will appear giving information about the application. Near the bottom you'll find a box marked Current Size. This box contains the number of Kilobytes of memory that your application will grab when launched. Increase this number by a thousand or so (by double-clicking on it and typing in a new one), and try printing again.



With System 7.1 you can select both a preferred size and a minimum size of memory that an application can use.

For really big documents, you may need to increase it again. But remember that the more memory that's used up by one application, the less is available to launch any other applications while it's running. *JC*

Quark quack

Q I've recently purchased a StyleWriter II printer and have had difficulty running it with QuarkXPress 3.1. *The text won't justify in columns – it becomes more ragged in the middle and right hand columns – and the quality of pictures is very poor. Yet when I borrowed a friend's old StyleWriter it printed my documents with no trouble at all. Why is this? The company I bought the printer from told me that* QuarkXPress *didn't support QuickDraw printers and suggested I buy* Freedom of Press, *which might solve my problem.*

Mac Helpline said that if I did a test print and there was nothing wrong with that, then I definitely had a software problem and that I should try removing ATM *and all PostScript fonts. I tried this and it made absolutely no difference.*

Stephen Webster
Brighton, Sussex

A The good news is that there's almost certainly nothing wrong with your printer. The bad news is that *QuarkXPress'* support for

QuickDraw printers is grudging at best. Quark says that the program is designed to be used with PostScript printers, and they have no plans to improve QuickDraw support. That you got such a good result using your friend's StyleWriter is remarkable, and the failure of your own printer is not surprising.

Unfortunately there is no easy fix. Buying a PostScript printer would solve the problem, but is probably rather more costly than you'd like. *Freedom of Press* is a PostScript interpreter that runs on the Mac and allows the PostScript code to be used with QuickDraw printers. However, considering you've only got 4Mb of memory it's unlikely that you could run *Freedom of Press* and *QuarkXPress* at the same time. *Freedom of Press* was discontinued earlier this year anyway. All I can recommend is that you check you're using the correct drivers for your printer (you almost certainly are, or it wouldn't work at all). You must also check with a local dealer to see if there are any drivers that are more up-to-date.

Perhaps the best thing you could do is to ditch *QuarkXPress* in favour of a more basic DTP program, such as *Home Publisher*, which costs £69 from Iona Software, tel: 081 241 8925. Not only would it use less memory and work faster, but it would support your StyleWriter II. *JC*

Compatible state

Q *Are hardware and software bought in the US compatible with my Mac?*
Lesley Boyd
Leeds

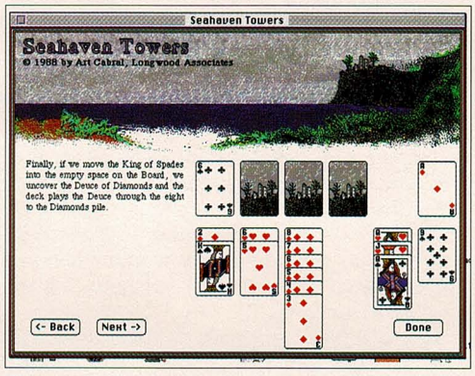
A The simple answer is yes and no. Most software should work unless it is designed to work with US specific hardware. The only difference you may find is that software such as *Word* is localised for Britain. That is, it has a manual and dictionary with British spellings.

The most obvious hardware that won't work is anything with an external power supply as it will require the US 120 volts. I would also steer clear of US modems that aren't BABT approved as they'll be designed to work with the US telephone network. There isn't really a major piece of hardware that you can't get in Britain, so take the safe option: save the postage and buy from a local dealer. *DS*

Printing by the sea

Q *I can't print out the help screens from* Seahaven Towers. *Can it be done or will I have to copy the information manually?*
Mrs J Jack
Glasgow

A You're quite right, the programmer hasn't included an option to print out the instructions. But there is a way around the problem: the Mac has a built-in screen capture facility. All you have to do is open the first help screen and capture it by pressing **[command] [shift]** and **3**. You should hear a funny clunking sound (which is supposed to be the sound of a camera shutter). After a few seconds a file will appear on your hard disk called 'Picture 1'.


Seahaven Towers
Seahaven Towers
© 1988 by Art Cabral, Longwood Associates
Finally, if we move the King of Spades into the empty space on the Board, we uncover the Deuce of Diamonds and the deck plays the Deuce through the eight to the Diamonds pile.
<- Back
Next ->
Done

Seahaven Towers is a great game but you do need a good memory to keep all the instructions in your head.

This file contains a picture of the screen as it was when you pressed the magic keys, and it can be opened using most applications including *TeachText*. You can then print this picture of the screen from that application. Repeating the procedure for the rest of the help screens will take a few minutes, but it's still quite a lot quicker than sharpening your pencil and writing them out by hand! *DS*

Watch your nano

Q *I own a 4Mb LC and I'm not sure what the options are for expanding the memory. Do I really have to throw away the two 1Mb chips and buy either two 2Mb or two 4Mb SIMMs? Alternatively, is it possible to replace the other 2Mb of memory on the motherboard? I have noticed in various catalogues that the LC needs 100ns SIMMs and I was wondering what this means and whether 80ns ones could be used instead.*
Geir H. Kenden
Bekkestua, Norway

A The LC has 2Mb of memory soldered on to its motherboard (which therefore can't be removed) and two sockets for memory expansion – which in your case are already filled by two 1Mb SIMMs. When expanding memory you must fill both sockets with the same capacity SIMMs. Therefore to upgrade your LC further you'll have to throw away or flog your two 1Mb SIMMs.

Note that the LC can only be upgraded to 10Mb, as the largest SIMMs it can handle are 4Mb. The LCII also has a maximum of 10Mb

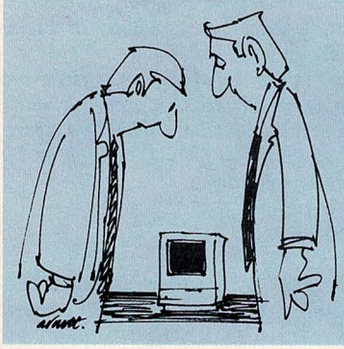
MONITORING THE PROBLEM

You need to keep an eye on your monitor. Backlights, colour capability and capacity can all catch you out if you don't pay attention...

Lighten up

MONITOR

Q *I've been told that the backlights on LCD displays can wear out after a few years. Is this true and what can I do about it if it happens to my PowerBook 170?*
Marcus O' Neill
Poole, Dorset



"It's the new 'Diet' version."

A All LCD displays have a limited lifespan. Just like your TV tube, you'll never be sure how long it's going to last. Unfortunately if they do wear out there's nothing you can do about it except replace the whole display, which is quite costly. In fact, as time goes by you'll find you may not be able to get a display replaced. Different PowerBooks have different displays and I doubt whether Apple will carry stocks of all displays forever. Fortunately, it's reasonably uncommon for a backlight or a display to wear out. I know a number of people with original backlit Portables and original PowerBooks who haven't had any problems. *JC*

Just add colour

MONITOR

Q *More and more applications seem to need a colour screen, but I can't connect one to my PowerBook 170 because it doesn't have a video port. Do I have any choice but to go out and buy a new system with colour capabilities?*
R. Gagnon
Hoofdorp, The Netherlands

A A number of the early PowerBooks along with the Plus and the Classic Macs don't include video ports. Some manufacturers, including Radius and SuperMac, produced video adapters that connected to the SCSI port. Some of these should still be available.

But these adapters don't work as well as a real video board: they can be slow and unreliable. The reason for this is that SCSI was designed to talk to devices like hard disks.

A nice array of sockets to plug things into, but sadly no video port. You can use the SCSI port, although you'll need a special PowerBook SCSI cable.

but the LCIII and LC475, on the other hand, can be upgraded to a more useful 36Mb.

The 100ns tag refers to the speed of the memory. When the processor accesses memory it takes the memory some time to process this request and produce a result, this being expressed in nanoseconds, which are billionths of a second. Therefore 100ns memory takes 0.0000001 seconds to reply to a request (which, if you were unsure, is pretty quick). This means that an 80ns chip is faster. And yes, you can use it instead, but you'll be wasting your money because Apple designs machines with a memory of a particular speed in mind, this speed being related to the speed of the processor. The speed of memory quoted is the slowest that the machine can use. It's usually possible to substitute faster memory, but you won't get any speed gain. *MC*

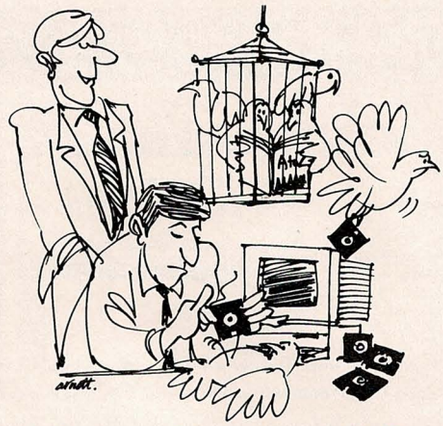
Call me Mac

Q *I'm purchasing a second Mac and would like to establish a network to share my printer and modem. I intend to use the built-in AppleTalk port. I understand there's a system called PhoneNet that uses telephone cabling. Can I use my existing phone cabling or do I need to splash out on a completely independent system?*

Paul Foster
Peterborough

A PhoneNet is indeed the best way to create a small network and the system does indeed use standard four-wire telephone cable. It does, however, and perhaps unfortunately, use the US phone connectors. These are smaller than normal British phone wall-plugs.

Most telephone lines only use two of the four wires inside the cable, meaning that you could use the other two for PhoneNet. However, I would advise you very strongly against that. You would have to get a qualified engineer to do it (probably at vast expense), meaning that it is cheaper to use a separate wire to connect your Macs.



"Has the network gone down again?"

All you will need is one transceiver for each computer and a cable to connect them. Measure how long the cable needs to be and ask your Apple dealer to make one up for you – it isn't tricky. The whole network should cost under £100 from an Apple dealer, although you may be able to get substantial discounts by going mail order. *DS*

It's a wonderful life INIT

Q *I've written my own screensaver extension as an INIT and want it to display its icon at startup, but I can't find any information on where to display it. Presumably at startup each INIT knows where the previous one drew its icon so it doesn't overwrite it. I've looked in the old version of* Inside Macintosh *and* Think Reference *but cannot find any information at all on the startup process. Can you help to get me going again?*

David Harrison
Clifton, Bristol

A One of the most peculiar things about the Macintosh System software is the startup sequence – in particular the way INITs display their icons. This feature was designed not by Apple, but by freeware and shareware authors.

The mechanism is complicated. The position of the last icon drawn is stored with a checksum in the last four bytes of the global variable which contains the current application name.

The best way to find out about this is to find a copy of the file *ShowIcon7*, which is a THINK C project that contains the source code. It can be found on the Internet at src.doc.ic.ac.uk in file packages/macumich/development/source/show icon7.sit.hqx.gz, among other places.

Alternatively, it should be on one of the example source code CD-ROMs such as *The Apprentice* or *MacSource* that are available for about £35 each from: Network Analysis Limited, 178 Wainbody Ave South, Coventry CV3 6BX. Tel: 0203 419996, Fax: 0203 690690, or e-Mail: nan.ltd@applelink.apple.com *MC*

Taking the P

Q *I bought a Performa 600 with System 7.1P installed. I'd like to install 7.1 over 7.1P but my Mac won't boot from the Disk Tools disk. Copying the System Folder on the Disk Tools disk to the hard disk and renaming the old System Folder doesn't work.*

Fuad Adams
Holland

A Getting rid of 7.1P is indeed a little tricky, and took me a couple of attempts the first time I tried. The problem is you can't simply in-

Handling video is more difficult. I'm afraid that it's time to sell your machine and buy a new colour portable. *MC*

Colourful language

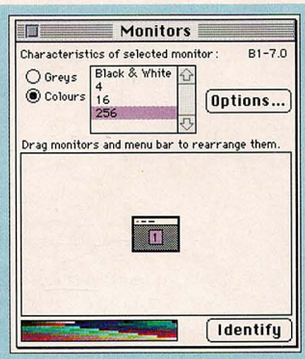
MONITOR

Q *Is it possible to fool the Mac into thinking it's using a smaller monitor – for example, from 14-inch to 12-inch – so it can display more colours?*

Alex Palmer
Handsworth, Sheffield

A The Macintosh determines the size of the display attached to it by the wiring in the video lead plug. Once your Mac's video hardware has determined the size of the display, it sets itself up so that it can use that particular display.

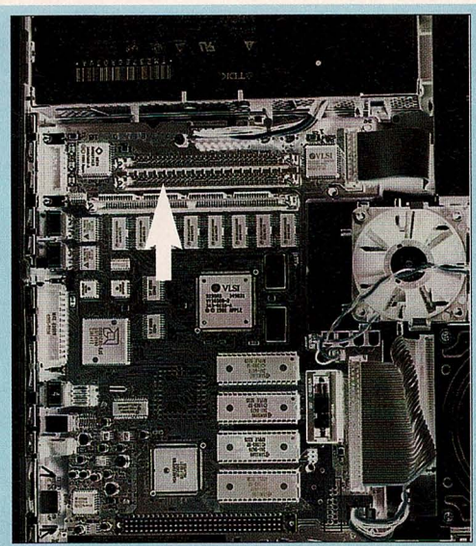
Most monitors can only display one size of picture and therefore trying to trick the video hardware with a different plug will mean the monitor can't display a picture. However, there are a number of so called multi-sync monitors that can display different size pictures. Apple's new 15-inch monitor, for example, can also display a lower-resolution 14-inch or higher-resolution 16-inch picture



The Monitors Control Panel will show you how many colours your monitor is capable of displaying.

on its screen. (That is, it displays the same amount of detail as a 14-inch monitor, using the same number of pixels per inch, only each pixel is bigger so that the picture fills up the screen. When it displays a 16-inch picture, there are more dots per inch than in a normal 15-inch image, but each one is smaller so that they are all squeezed on to the smaller screen.) Generally speaking, multi-sync monitors come with special software that enables you to change the resolution without restarting, and this does indeed give you a wider variety of colours at a lower resolution.

The best method to get more colours on your monitor is to use the age old trick of cranking open your wallet, and buying more video memory (VRAM). This comes on

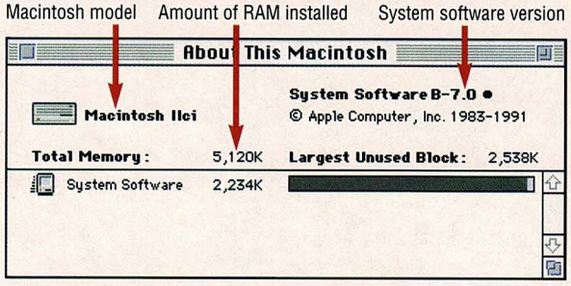


To upgrade the video RAM in an LC and LCII, you'll need to remove the current 256K SIMM and replace it with a 512K SIMM. The LCIII and most newer Macs have an empty SIMM slot into which you can add extra video memory.

SIMMs that are very similar in look and design to RAM SIMMs, and are easy enough to install yourself. *MC*

HOW MUCH RAM HAVE YOU GOT?

Obvious, but true: even the same models of Mac can have different amounts of memory or run different System software. To solve your problem, first we need to know all about your setup; find out here. Ensure you are in the Finder, point to the **Apple** menu and go to the first item, **About This Macintosh**, then release the mouse button and all will be revealed.



stall 7.1 from the normal set of 7.1 disks. This is because reinstalling your System updates things like the Finder and System file rather than creating brand new ones. Also the process doesn't delete Extensions that you might not need such as *At Ease* and *Launcher*.

Therefore, what you need to do is create an entirely new System Folder from scratch. First you'll need to rename your existing System Folder to something like System Folder Old. To tell your Mac that this is not still the active System Folder, drag the System File out and put it somewhere safe. The System Folder will lose its custom icon.

Now restart from the floppy disk called 'Install 1' and install System 7.1 from it. You'll now find a brand spanking new System Folder on your hard disk. This should have the normal System Folder icon. When you restart your Mac it'll boot from that System Folder. All that is left to do is drag your favourite Control Panels and fonts from the old System Folder on to the new one. *DS*

Fraggle Rock

Q *I suspect that I have a corrupt Desktop file. My defragmenting software,* Fast Unfrag, *says it is fragmented, but is unable to defragment it. I'm stuck. Have you got any suggestions as to how I can patch it all back together?*
Paul Mackey
Clwyd

A This brings up the old problem of the difference between rebuilding your Desktop and defragmenting your hard disk. Although similar in purpose, they are, in fact, two entirely different processes. Fragmentation means that when you save files to your hard disk, it saves information in several locations. It does this because there's no one space large enough to hold the whole thing. Defragmenting your hard disk joins files back together if they have become split apart, and also helps to speed up your machine a little.

TechTool is a neater and more powerful way to rebuild your Desktop and solve those icon problems.

The Desktop file contains information about where these files are and what icons they have. Rebuilding the Desktop causes your Mac to update this file and can solve a whole bundle of problems, particularly icon related ones. *Fast Unfrag*, a popular shareware utility, can defragment your hard disk. But what it won't do is update your Desktop file and so this isn't really what you want.

You can rebuild your Desktop by holding **[option]** and **[command]** at startup, but I would suggest using the shareware program *Tech Tool*, which was on the MACFORMAT 18 cover disk. Rather than updating the file, this program deletes the old one and builds you a brand new one. *DS*

MACANSWERS

If you send in a question for the MACFORMAT experts to solve, please fill in and include this form (or a copy of it). And please make sure that you include all the relevant details – version numbers of software and so on – so that we have the best chance of helping you. Send your form and question to:
Mac Answers, MACFORMAT, 30 Monmouth Street, Bath BA1 2BW.
Or fax it to us on 0225 446019.

Name .....

Address .....

.....

.....

Your Mac
(For example, Performa 200, IIfx, PowerBook 145):

.....

System version
(see About this Macintosh screenshot above):

.....

Amount of RAM
(Total Memory figure from the About This Macintosh dialogue box):

.....

Are you using Virtual Memory? .....**YES/NO**
(This is accessed from the Memory Control Panel under System 7)

Do you have 32-bit addressing turned on? .....**YES/NO**
(This is accessed from the Memory Control Panel under System 7)

.....

Details of any relevant hardware which could help us to answer your question:

.....

.....

.....

Now, use this space to describe your problem or question. Include as much relevant information as possible. Please continue on a separate sheet if necessary.

.....

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Hard problems

Hardware trouble? Alex Summersby sorts it out with careful cleaning and judicious thumps...

Good news first: most Mac crashes, freezes and startup glitches are caused by software. The next most common cause is problems with SCSI, the system that connects your Mac to devices such as hard disks, CD-ROM drives and scanners. We examined all these problems in MACFORMAT 18 and 19, and included advice on what action you can take to try to solve them. Now for the bad news: sometimes – just sometimes – the problem is actually hardware-based. But don't panic! Hardware faults are not necessarily disastrous either. We've looked at some of the most common over the past two issues; here's a quick guide to others you may come across...

Problem: Startup glitches

The normal startup sequence fails to run its course, and tests suggest a problem with the startup disk itself.

Possible cause and action

We've considered a range of possible causes in the last two issues, and suggested a few culprits. Here are some more checks for specific hardware problems. After the startup chime, watch for the disk access light. If it flashes briefly and then stops, the disk is moving but your Mac is not getting any information from it – you may have a problem with the disk read head. Listen for hard disk activity. If the disk is OK, you should hear it whir. If not, you may need to have it looked at by someone knowledgeable.

Apple used a batch of Quantum hard disks which went mostly into SE/30s. The oil that lubricates the disk and allows it to spin is prone to drying up, and you literally have to kick-start these – that is, thump your Mac – to get them going. Whirring and clunking means it's getting power and spinning. (When you've got it up and running, use *SCSI Probe* to get more information about the disk – at least you'll find out whether it's a Quantum disk or not.)

Another cause of problems is what's called 'stiction'. The hard disk's read/write head shouldn't actually come into contact with the surface of the disk itself, but should 'float' a fraction of an inch above it. Sometimes the speed of the spinning disk can create a vacuum effect that forces the air out from between the head and the disk – result: the head seizes up. It can easily be jolted back into movement – though jar it too violently and you could suffer a 'head crash' (when the head bounces off the surface of the disk), and this can cause loss of data. The moral is: if you have recurring problems with disk spin, take it to a qualified service engineer before it's too late.

Problem: mad keyboard

When you hit a key (and sometimes when you don't), you get peculiar characters appearing, or a succession of alert sounds, or various functions executing or trying to execute.

Possible cause and action

The likeliest cause here is simply sticky keys – particularly if you have one of the newer 'membrane' keyboards (they feel more 'spongy' than the older kind). Have you ever spilled a sticky drink on it? (Coca-Cola is just about the worst for sticky residues. Hot chocolate isn't such a good idea either...)

If the **[command]**, **[option]** and **[shift]** keys are stuck, lots of things you type will be interpreted as command-key combinations. Often it is enough just to give these keys a bit of a bash to free them up. If the problem is more widespread or more persistent, Apple does say that you can just hold your keyboard under a tap (*unplug it first!*), give it a good rinse, and then just hang it up to dry – no, honestly! But do make sure it's completely dry before you use it again...

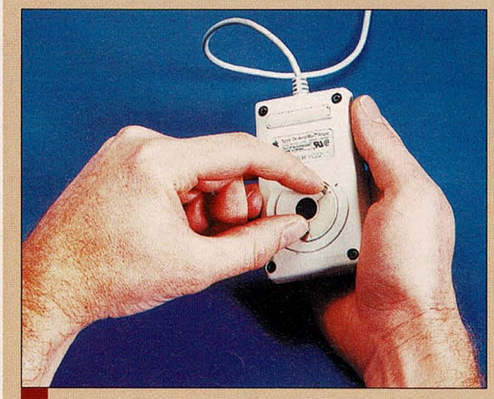
Alex Summersby

GENERAL CHECKS

Whenever you suspect a hardware problem, the first check you should carry out is to swap the suspect device for another and see if you still have the same problem. Run some of the obvious checks:

- Is everything switched on at the power switch and at the wall plug?
- Are all the cables securely plugged in and free of obvious physical damage?
- If you get a 'sad Mac' suggesting a memory problem (see MACFORMAT 18), open your Mac up and check that the SIMMs are firmly seated in their sockets – the right sockets! But beware: opening up a Mac less than one year old will invalidate the warranty, so you won't be able to get free repairs if there is a serious problem. Best leave it to the dealer! The same applies if talk of SIMMs made as much sense to you as a Swahili recipe book.
- Some diagnostic software can spot problems with hard disks and so on, but usually not repair it. So if you can get your Mac working at all, try programs like *Snooper* or *MacEKG* – a collection of them was yours with MACFORMAT 18.

FIXING A DIRTY RODENT



1 If your cursor keeps hopping in a jerky fashion about the screen rather than smoothly following your mouse movements, you probably have dirt somewhere in your mouse. Fortunately, cleaning it is simple. Unplug it and turn it upside-down. On most mice, you can rotate the casing around the ball anti-clockwise to release the ball. (On some newer mice, however, you need to slide the casing out and snap it back in afterwards.)

2 Turn the mouse over and let the casing cover and ball fall gently into your waiting hand. It won't hurt the ball too much if you drop it – it's a tough little rubber beastie – but don't go bouncing it off the walls. This could conceivably cause small indentations and irregularities in the ball, which means that the little rollers that sense its movement may not make good contact and this may cause the cursor to jump, which was your problem in the first place...

3 Inside you should clearly see the little rollers. (One is a dummy, just to keep the ball in place; the other two detect horizontal and vertical movement.) To clean loose fluff out, blow strongly into the opening. To clean the rollers and the ball itself, use a cotton bud dipped in isopropyl alcohol or hi-fi cleaning fluid – try chemists, larger Boots, or your local hi-fi shop. Use tweezers or similar tools to scrape off stubborn stains. Make sure everything is clean and dry, put it all back together, and... happy motoring!

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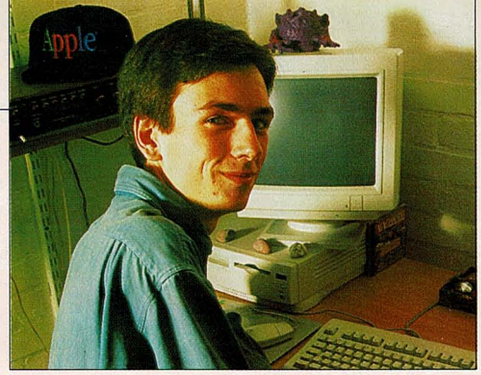


A Maniac in the making

There's more to the excellent arcade games on MACFORMAT's cover disks than meets the gamer's glazed eye. Alex Metcalf takes you behind the screens of his game, *Maniac*...

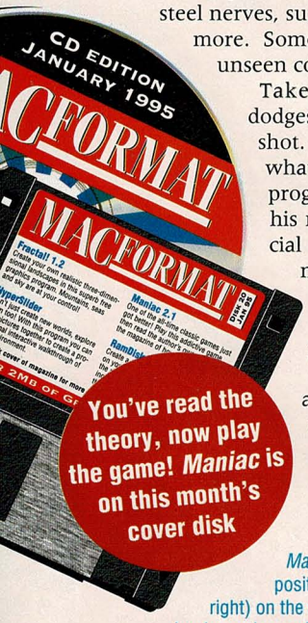
In this article '¬' means 'this is not the end of a program line'

Game on! You're the yellow guy in the hat. The object is to eat all of the dots and not get caught by the ghosts. (If you're a child of the '70s, you already know this...)

Open the door. Blam! Blam! Too slow, Herr Nazi. Walk forward. Pick up ammo. Walk... Wait a minute. How *did* you do that? Lightning reactions, steel nerves, sure. But there's something more. Something about pixels and unseen computer commands...

Take that *Wolfenstein* Nazi. He dodges, he weaves, he gets shot. Every time he dodges, what's happening is that the program is secretly preparing his next movement in a special drawing area which you never see. On screen, you get smooth animation – and a bullet-ridden bad guy biting the dust.

Games like *Wolfenstein* are carefully written to squeeze every ounce of power out of your Mac. Special techniques are used to make the game as heart-poundingly exciting and as realistic as possible. To explain what's happening in these programs in simpler terms I'll use examples from my own game, *Maniac*. You can find a full copy on the cover CD and there's a smaller version, without background music, on the floppy disk.



You've read the theory, now play the game! *Maniac* is on this month's cover disk

Loading... please wait...

If you're a games enthusiast you'll probably have noticed that games in general take longer to load than other programs. This boils down to the fact that games *work* differently.

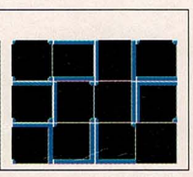
Word, *Excel*, and other main applications generally require less memory than disk space. That's because they only load parts of the program when they're needed. For example, a spell-checker in a word processor is only loaded if you select it from the menu.

But this approach doesn't work well for games. If you're playing an action packed shoot-'em-up, you don't want annoying pauses in the middle of a game while the next sound is loaded. To prevent this from happening most games load *all* the graphics, sounds, and other essential codes right at the beginning. This is why games need quite a lot of memory – usually around about two or three megabytes, and sometimes more.

Maniac loads like any other game. You see a **loading** window appear, and all the sounds and graphics are loaded into memory. *Maniac* also loads in other useful stuff, such as the information which describes how each of the levels is arranged.

Level data

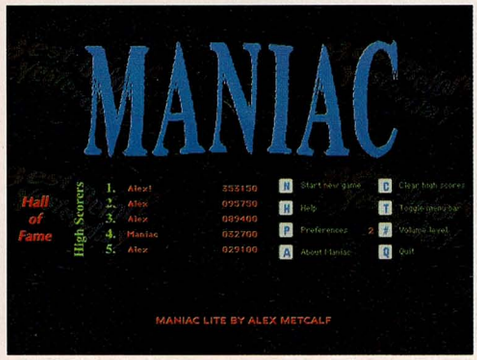
```
08 05 02 02   02 02 09 03
03 08 02 02   02 02 05 09
03 0B 05 02   02 05 0A 03
03 0B 05 02   02 05 0A 03
06 09 0B 05   02 0A 08 04
04 09 0B 02   05 0A 08 07
```



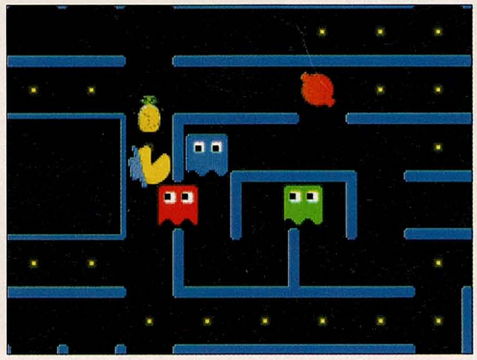
Rather than store the entire game board as one big picture, *Maniac* uses the level data (right) to position the various board pieces (far right) on the screen. This means that different levels can be made just by typing in new numbers.

Looping the loop

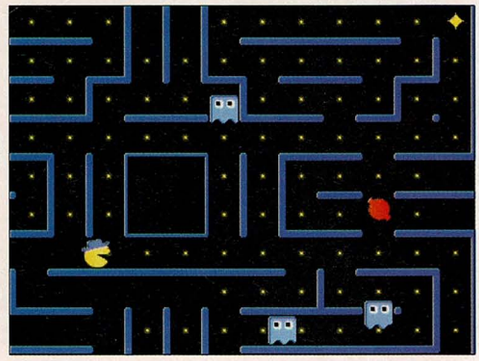
In any arcade game, one thing always happens when you start playing: the game's code goes into a 'game loop'. This loop controls the running of the game. The sprites are set in motion, any sounds are played and so on. It's called a



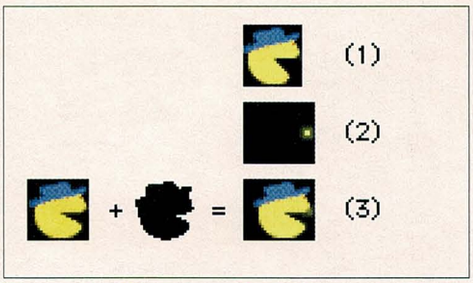
It wouldn't be an arcade game without a hall of fame, and it's not a difficult extra to add. Nor are the key-pad explanations.



A close shave... When the ghost and pacman overlap – by a specified amount – the program will subtract a life.



But you've got more than one. And sometimes the boot's on the other foot. Here, the ghosts are running scared. Get 'em!



These are the different stages of animating a sprite. (1) is the sprite in its first position. (2) is the background enclosing the old and new sprite position. (3) is the sprite in its new position, copied over the background by using a mask. The result from step (3) is then copied from the scrap area to the screen. And what you'll get is the pacman moving. Easy.

The first screen, programmed to appear when the game's loaded and everything's ready. The game loop (see below) hasn't started yet, but it's about to.

loop because it's repeated over and over again, usually 30 times per second.

Surely a Quadra would run through the loop faster than a Classic, making the game faster too? Well, yes. This is why almost all games use a timer. The timer starts at the top of the loop. Then the code in the loop runs. At the bottom of the loop the code waits for the timer to run out. Then it goes to the top and starts again.

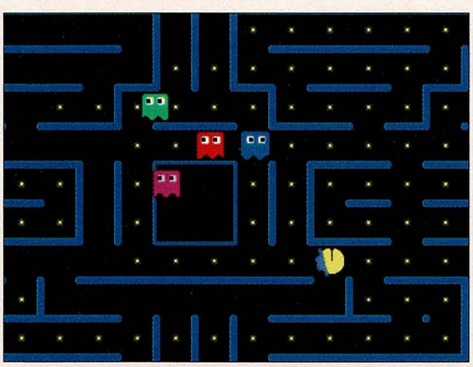
This means that the Quadra may wait a long time for the timer to run out, while a Classic may only just make it to the bottom of the loop before having to return to the top. Since it's the timer which dictates game speed, the game should run at the same speed on all Macs. But some complicated games slow down on less powerful Macs because the timer runs out *before* the Mac makes it to the bottom of the loop.

What actually happens in this game loop? Here's a simple 'pseudo-code' snippet which shows what *Maniac* does:

```
game loop
  Start the timer
  Has the user pressed a new¬
  direction key?
     If so, see if we're allowed to¬
     change pacman's direction
  Calculate the new positions of all¬
  the objects (pacman, ghosts, etc.)
  Has the pacman run over a dot?
     If so, delete the dot and¬
     increase score
  Has the pacman hit some fruit?
     If so, delete the fruit and¬
     increase score
  Has the pacman gone into a¬
  transporter?
     If so, move pacman to the¬
     other side of the screen
  Draw all the objects
  Has the pacman hit a ghost?
     If so, is it the player's last¬
     life?
          If so, end the game
     Otherwise take away one life ¬
     and keep going
  Wait for the timer to run out
end of game loop
```

It's quite simple for *Maniac* to detect two objects colliding – the pacman and a ghost, for example. The screen image on any Mac is made up of 'picture elements' or pixels – 640 of them horizontally and 480 of them vertically on a 14-inch screen. You can locate any of these dots using a straightforward coordinate system – '0,0' is the top left of the screen, '30,1' is 30 pixels across and one pixel down from the top left, and so on.

All the objects larger than one pixel are given a rectangle as a location, so *Maniac* simply checks whether the rectangles overlap by a certain amount. More complex games, such as those involving bullets, usually check whether the bullet actually touches the sprite. But *Maniac* doesn't need this kind of accuracy.



Bam! You've hit a wall in the maze. The program won't let you go any further. Time to change direction.

The dots will vanish whenever the pacman runs over them. And when the dot vanishes, your score increases.

Graphic detail

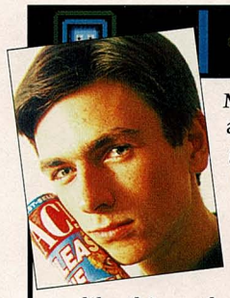
Listen in on any game programmers' conversation and you're certain to hear people arguing over the best way to do graphics. Graphics and animation are central to most games and they can be created in different ways.

Consider the simplest way of moving a sprite on the screen. You'd probably think of drawing the sprite in one position, erasing it, and then drawing it in the new position. This works well for simple animation programs but it will make the sprite flicker as it moves. You don't see that happening in many arcade games, so there's obviously a better way.

Most games use what are called off-screen drawing areas. Mac programmers also call them 'off-screen worlds' or 'graphics worlds'. These are basically areas in memory which can be drawn on in the same way that things can be drawn on the screen. The only obvious difference is that you can't see what you've drawn. Games usually use them to store graphics which can be quickly accessed and assembled into a format ready for display on the screen.

Maniac uses no less than four graphics worlds. Each one of them is 640x480 (same as

PLATFORM BLUES



Most computers have literally hundreds of platform games, where you control a character from a side-on view as he runs left and right, climbing ladders and stuff like that. But there are very few games like this on the Mac. Why?

The main reason is that the Mac doesn't have a dedicated graphics chip. When a program is drawing something on the screen, it has to wait until the drawing is complete before it can get on with the rest of its work. This means that most Macs aren't fast enough to draw entire screenfuls enough times per second to make scrolling screen games feasible.

To combat this problem, many developers use clever techniques to get around this. *Rebel Assault*, included as a demo on the MACFORMAT 19 cover CD, only draws every other line on the screen. Redrawing the screen takes roughly half the time.

But until the majority of Macs can cope efficiently with full screen redraws we're unlikely to see many scrolling platform games appearing on the market.

JARGON BUSTERS

Masks: black and white graphics which are used to tell the game which areas of another graphic to copy. Think of them as cardboard cut-outs through which you can only see a certain part of a picture underneath.

Sound channel: when a program wants to play a sound on the Mac it needs to make a sound channel. A channel is basically a queueing system for organising sounds to be played and sound commands to be executed.

Sprites: a term for small graphics, usually used when talking about games or game animation. A ghost or pacman is a sprite.

a 14-inch screen) in size. Two of the graphics worlds are used to store all the different graphics and masks which are used in *Maniac* during the game. The third holds a picture of the game board, with all the walls, dots, and power pellets. And the fourth world is a scrap area which is used to prepare all the different sprite movements before they're copied to the screen.

When you're creating the program the sprites can be drawn with your favourite paint program. With *Maniac*, I just copied the graphics out of my paint program and pasted them into my *ResEdit* file. All the graphics are original creations; lots of them are basic shapes and text to which I've applied special effects.

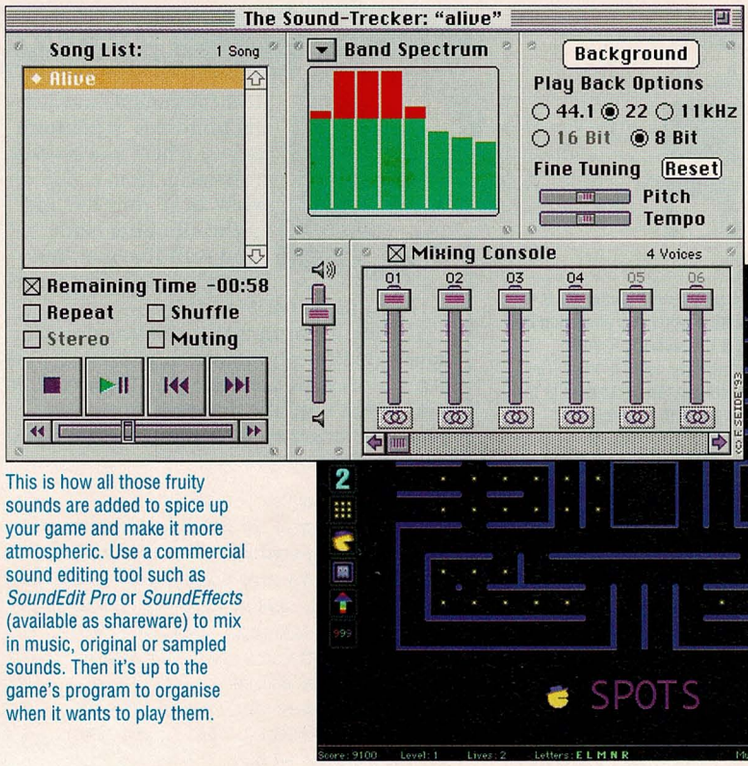
To animate the sprites, *Maniac* uses a three step process. First of all it figures out how big a rectangle needs to be to cover both the old and the new positions of the sprite. It then copies the background of this size from the 'game board' (graphics world three) to the scrap area (graphics world four).

Next, the picture of the sprite is copied to its new position on the scrap area, on top of the background we just copied. Masks are used to copy only the important areas, so that *Maniac* just copies the actual picture and not the black area around it.

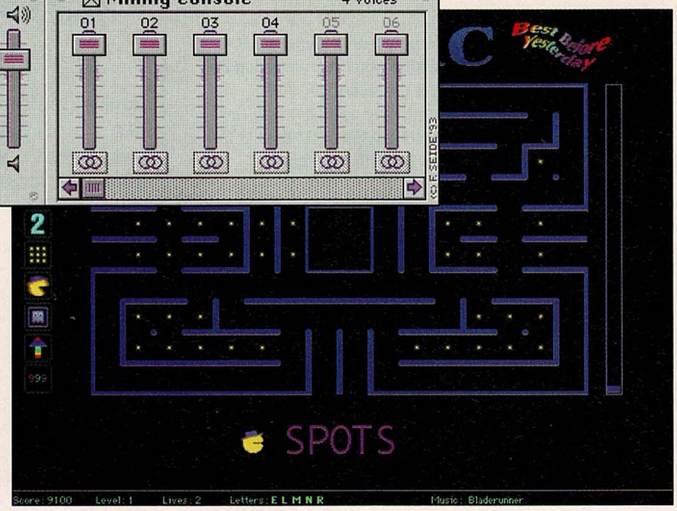
Finally, the rectangle covering the old and new positions (which now contains the background and the sprite in its new position) is copied from the scrap area to the screen. At last, you see the sprite movement in one change on the screen. And there's no flickering.

If you've been following along carefully, you'll have noticed that we'll start to have problems if two sprites, such as the pacman and a ghost, ever come close to each other. One sprite will be drawn, and the background of the next one will be drawn over the top. To prevent this happening the drawing for *all* the sprites is done at each step.

All the backgrounds (one section of background per sprite) are copied to the scrap area, then all the sprites are drawn over top. And then everything is copied to the screen. Because we're using masks, all the sprites will overlap correctly and a curved sprite will only make a curved hole in a sprite underneath.



This is how all those fruity sounds are added to spice up your game and make it more atmospheric. Use a commercial sound editing tool such as *SoundEdit Pro* or *SoundEffects* (available as shareware) to mix in music, original or sampled sounds. Then it's up to the game's program to organise when it wants to play them.



To get from one level to the next in *Maniac* you have to guess the missing word, as in the pencil-and-paper game Hangman.

Fruity sounds

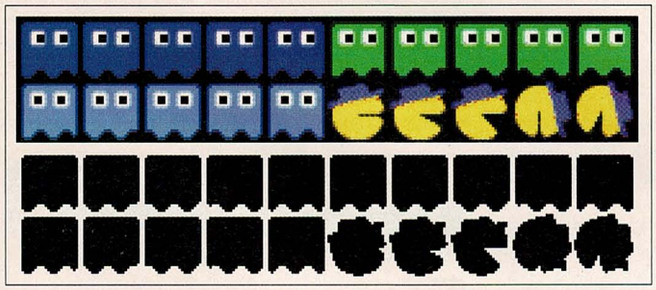
Many good games have become great games by using good sound effects and suitable background music. *Myst* is a perfect example. It's enhanced through the designer's careful choice of atmospheric music and sound effects.

Given the sound input capabilities of Macs these days, recording original sounds into games is getting much easier. Most of the sound effects in *Maniac*, and some of the music, are my own. They involved a recording of some sound through the built-in microphone, followed by a special effect added by a sound editing program. There are commercial sound editing tools available, such as *SoundEdit Pro*, but *SoundEffects* by Alberto Ricci is a good shareware alternative.

The full version of *Maniac* from the cover CD also has an original opening 'Maniac' soundtrack, which is my own composition. Most of the music was done on my synthesiser, a Yamaha keyboard. Then I used a sound program to dub my voice over the top.

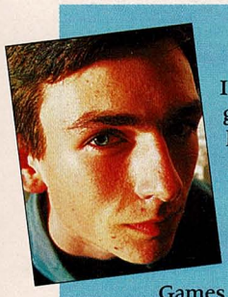
Storing sounds for your game can be done in different ways. Some games store their music in MIDI format. Instruments are recorded playing a single note. Music can then be arranged by typing in values to say which instruments should play at what times, and at what pitch, volume, etc. *Lemmings* follows an approach like this, which enables it to store many music tracks in a small amount of disk space.

Maniac's music is from a MOD music file (these have been popular for many years on



Shown here are a small number of the graphics stored in *Maniac*. The top set are the sprites you actually see on the screen, and the bottom set are the masks associated with those sprites.

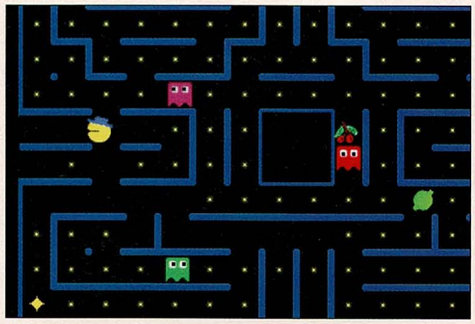
TESTING, TESTING...



In order to make games faster, game developers sometimes have to bend the rules. For example, there's a standard Mac programming command (CopyBits) for copying graphics. It's usually used for copying to the screen. Games could use this quite happily, but many developers (including me) write their own versions. These do less compatibility checking but are useful in that they try to get the job done a whole lot quicker.

The down-side of this is that the games may start to have compatibility problems with third party hardware, or even different Macs. This makes extensive testing essential: different Macs, screens, and even hard disks and keyboards need to be tested for compatibility. You're more likely to see game updates available than any other type of update, because it's very hard to get a game right first time and to make it compatible with every Mac

Ah. Not a good position to be in. At times like this you wish you'd built cheats into your program.



Ghost and fruit can't collide. They'll overlap, but there is no effect in game terms. You just won't see the cherries briefly.

Eat all the dots on the screen and successfully solve the missing word bit and this is what you get.

Amiga computers). It's played by using the code from Frank Seide's *The Sound-Trecker* application. The music files store instrument sounds at a single pitch, plus information on when to play the sounds and in what way. Several minutes of music can be stored in a file which uses less than 100k of disk space, so packed programs can still have decent sound.

When it comes to playing sounds, it's up to the game's program to organise which sounds play and when. In *Maniac* a sound is played, for example, when the pacman eats the fruit. The code looks something like this:

```
If pacman is touching fruit then
  Hide fruit
  Increase score
  Start playing 'eat fruit' sound
```

To play the sound, *Maniac* finds the sound resource in its memory (loaded, as with everything else, at the beginning of the game). It then passes the sound over to the Mac's Sound Manager, which plays it. Once *Maniac* has sent the sound, the System software is left to take care of playing it until it's completed. The benefit of this is that *Maniac* is then free to get on with the other work to hand.

The Mac provides a way to play the game's sounds, and has support for playing multiple sounds simultaneously. But it's up to the application to add other sound features such as fading, echo, and similar effects.

Maniac has three different channels on which it can play sound. It plays sounds by telling its own sound code (the AudioManiac sound system) what sound to play, and what priority that sound has. If there's a free channel (a channel not playing a sound) then the sound is played on that. If not, and there's a channel playing a sound of lower priority, it gets stopped so the new one can be played. It requires a bit more fiddling and programming work, but it's well worth the trouble.

Is that all, folks?

This article has only covered the key game elements and the ways in which they work. There are, of course, more than just arcade games on the Mac, but they generally use relatively intuitive programming methods.

Arcade games and gaming techniques will continue to evolve and develop, and the games can only get better. If you want test the water and try some game programming, take a look at the 'Do it yourself' box.

Alex Metcalf

DO IT YOURSELF

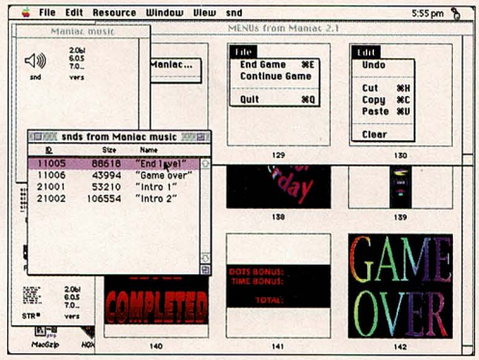
So, you've read the article and played the game. You'd like to do some game programming of your own. But where do you start?

If you've never programmed before then a good place to start is with something like *HyperCard* or *SuperCard*. You may not be able to do games like *Maniac*, but you can learn good programming techniques, and you can make some really high quality software when you get going. I wrote a fruit machine game in *HyperCard*, and there's potential for all sorts of games.

If you feel confident about your programming capabilities then a language like *C* or *Pascal* is good. *Pascal* is a great language for learning (it points out programming mistakes as you type, for example), but *C* is the more popular language these days. *Symantec C* is good, and there's also Metrowerks' *Code Warrior* (on CD only, though).

But you'll need more than just the language. You'll need a good book to learn *C*, and probably a separate book to learn how to write Mac-like stuff. Check out your local computer bookshop and see what's available. Finally, you'll need some of the *Inside Macintosh* books, available from software warehouses such as Meridian (081 543 3500) if your bookshop doesn't stock them. They cost about £30 each and are basically reference books for every Mac command you could ever need.

For those with Internet access, check out the Info-Mac archives and get some example game source code. A good place to start is the *Cheese Toast* game source code, which was kindly made available by the author for everyone to download and have a look at!



If you like fiddling around with programming, then you could put the sounds onto three channels for better effect.

Yesssss! Time to clench your fist, punch the sky for the benefit of any observers etc. You're up in the hall of fame.

Once again the ghosts are running scared, because you can eat them. But the eating arrangements will soon be reversed.

Same number of ghosts left to eat, and you've got more time on the timer so you can rack up more points.

Sure enough, all ghosts are eaten, with time to spare. The sprite to the right of the pacman is the dead ghost.

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ISSUE 13

June 1994

■ **On the disk:** *Syndicate* demo; *Disinfectant 3.41*

■ **On the CD-ROM:** sorry, CD-ROM edition is no longer available

■ **Inside:** How to double your RAM and disk space – without buying extra hardware; *Print Shop Deluxe, ColorStation* and Fargo Primera printer reviewed

ISSUE 15

August 1994

■ **On the disk:** *GrayStation; Vistapro* demo; *Quill*

■ **On the CD-ROM:** *Flying Nightmares, Bird Songs,* and seven other demos

■ **Inside:** art on the Mac, including reviews of *Dabbler, Fine Artist* – and the Wacom, CalComp and Summagraphics tablets, plus a preview of *11th Hour*

ISSUE 16

September 1994

■ **On the disk:** *ColorStation 2* and *HomePublisher* demos

■ **On the CD-ROM:** TWIG, *Tetris Max 2.3* and Readers' Contributions

■ **Inside:** our guide to weird Mac software; create charcoal effects in your art package; plus reviews of *Multimedia Workshop, Home-Publisher* and *Return to Zork*

ISSUE 17

October 1994

■ **On the disk:** *Crunch 2.0* and *Conflict Catcher* demo

■ **On the CD-ROM:** sorry, CD-ROM edition is no longer available

■ **Inside:** discover how to future-proof your Mac with our top add-ons; plus *Sensory Overload, WordPerfect 3* and the best presentation packages reviewed

ISSUE 18

November 1994

■ **On the disks:** trouble-shooting utilities, complete Internet software bundle

■ **On the CD-ROM:** *Claris-Works 2.1, Rebel Assault* and *Sensory Overload* demos

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ISSUE 19

December 1994

■ **On the disk:** Hot action with *Wolfenstein 3D, Kid Pix, Welcome* start up message

■ **On the CD-ROM:** Games galore, *Now Utilities 5.0,* plus loads more

■ **Inside:** The lowdown on accelerators, the 20 top Mac games, the best new home education software, SCSI troubleshooting

Everyone's at it nowadays – writing Mac software, that is. Derek Smith bravely wades through it, looking for pearls, and finding the odd swine...

There's a fine collection of shareware this month, including feminism, bingo, bumps, Europe, balloons and gophers. And pawprints. Nowhere else could you find this fascinating range of topics, except perhaps in the *Daily Sport*.

2Way Talker 2.2

NETWORK TALKING

Shareware $79.95 per user

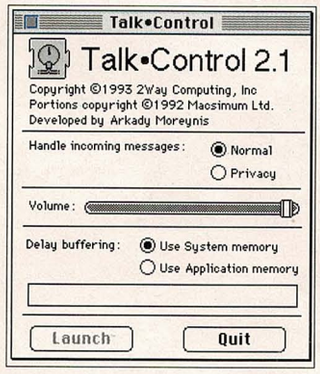
Talk is cheap, or at least it used to be. This shareware program costs $80. Just as well it's rather good. What it does is add an extra dimension to comms – sound.

For a couple of years all new Macs have come with a funny, round plastic thingy, which usually gets shoved in a drawer and forgotten about. In fact, it's an input microphone that enables you to record things on to your Mac.

Traditionally this has been used to record rude noises, accompanied by snatches of hilarity, into the Sound Control Panel. These sounds are then set as the alert noise on an unsuspecting person's Mac. Amusing, but limited in scope. The microphone now has a far more productive use in the form of *2Way Talker*.

If you're connected to a network, you can speak in real time to anyone else connected to that network who also has the program installed. And if they also have a funny, round plastic thingy, they can talk back.

If this sounds rather like a telephone, then it's because it is. Obviously this is much better than a telephone, though, because, erm, it uses a computer and therefore it must be. There's a special introductory price of $49.95 for a single copy of the program. This seems an awful lot of money to be able to talk to yourself over a computer network. Strange world.



Nobody ever writes to me, nobody ever phones me, and now, with the miracles of modern technology, nobody networks me either.

Sourcing the shareware

We often get calls from keen readers who want to know where they can get hold of some of the shareware we review in these pages. Well, here are some of the ways:

1. Buy the CD-ROM edition of MacFormat, because all the shareware we review is on there in a separate folder. There's also a wealth of other shareware on the CD, which we've sorted into categories for you.

2. Write to a shareware dealer; there are several who advertise in the back of MacFormat. The dealer should have the program you are after, especially if they subscribe to our CD-ROM edition!

3. Use the Internet, if you have access. One of the best sources around is Imperial College at src.doc.ic.ac.uk. Use ftp to connect (login: anonymous; password: your e-Mail address) and cd to computing/systems/mac. Personally, I use the umich directory, but sumex is fine as well.

4. In a few months we will be setting up our own bulletin board using a brand new version of a wonderful BBS program, which should be absolutely brilliant, and a joy to use. We will let you know as soon as it is up and running. Future Publishing is also about to become an Internet site, so you'll soon be able to access us like any other Internet server.

5. Local user groups often have libraries of shareware, so see if you have one near you. There are some listed in our Reader Ads section (see page 122).

Finally, wherever you get your shareware, beware of viruses. At the time of going to press, *Disinfectant 3.5* (on MacFormat 14's cover disk) was the best and cheapest way of staying safe.

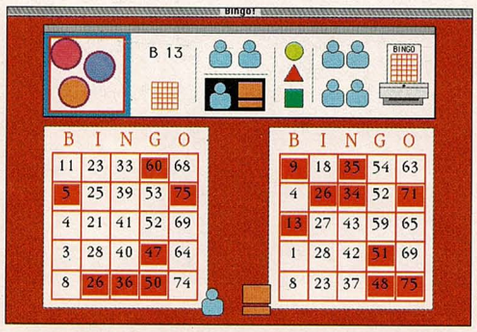
All Ages Bingo!

GAME

Shareware $18

Here's a nice wholesome game for the family: Computer Bingo. You can print the bingo sheets out if a group of you want to play, or two people can play on screen. The game is specifically designed to be easy enough for children to enjoy while not boring adults to tears.

For very young children, you can dispense with numbers and match shapes instead. The game is bright and bold and has large clear controls. Bingo is hardly the most riveting of games ever developed, but if you're looking for a Mac version, look no further.



I lose at *Populous*, my Mac destroys me at chess, and now it shouts 'House!' at me and looks smug.

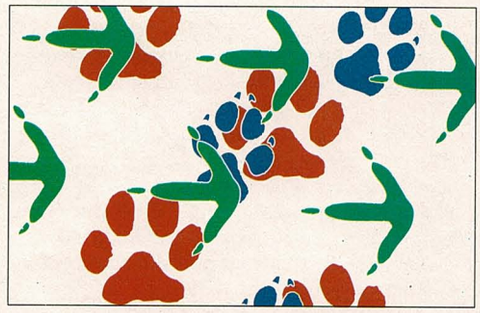
Animal Tracks 1.0

FONT

Shareware $10

A whole collection of pawprints from your favourite little furry animals await you in this marvellous font. I'm not an expert on animal feet, but these look pretty accurate and I'm sure experts could spend many fun filled nights identifying their favourite animals.

By pressing any key you get the front-left foot print, while if you press the same key with **[option]** pressed down you get the front-right. Unfortunately, not every key on the keyboard works in combination with the **[option]** key, so the end result is a few limping animals.



Name the species, genus and nickname of each creature shown above. You have 30 seconds, starting now.

Debump

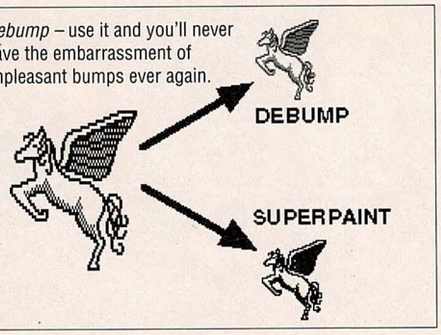
GRAPHICS

Shareware $10

This isn't a rude French film, but rather a graphic utility program. Its job in life is to shrink your bitmap pictures. The purpose of this may seem as clear as a rap singer's pronunciation, but on the few occasions that you do need it, *Debump* is very useful.

If you load a bitmap picture into a low-end

Debump – use it and you'll never have the embarrassment of unpleasant bumps ever again.

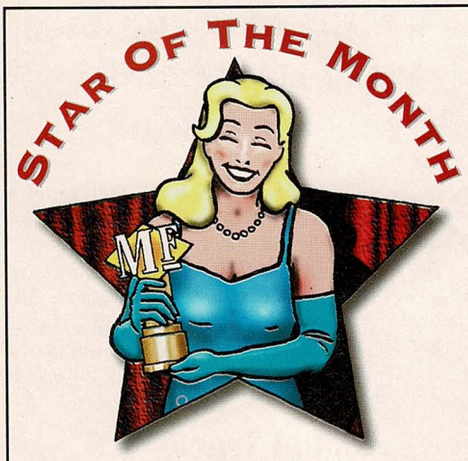


graphics program such as *SuperPaint*, you run into a problem when you try to shrink it. What the program does is to delete some of the pixels to make it smaller. The result? The image gets blocky, loses definition, and if shrunk too small ends up looking like a photocopy of Norman Fowler's face. Not good.

Debump shrinks a picture by increasing its resolution. Let's say you have an ordinary black and white picture at 72 dots per inch. That means that every square inch of the picture consists of 72 x 72 dots. If you make those dots half the size, you end up with a picture that is a quarter of the area, but with all the detail. And that's just what *Debump* does for you.

Debump also has an anti-aliasing feature. This has nothing to do with a prejudice against aliases of files. What it does is smooth out a picture. The process involves adding pixels with subtle shades of the colours that surround them to produce a blending effect.

If you use *Photoshop* or its like then you won't need *Debump*, but otherwise it's definitely worth keeping a copy close to hand.



GopherGolf

CRAZY GOLF

Shareware $15

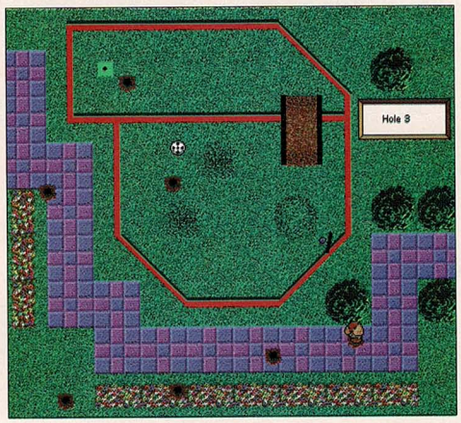
Forget playing tournaments in *PGA Tour* or the photo-realistic graphics of *Links Pro*, the only golf game you need is right here. Instead of having to worry about which club you need to chip out from the rough, you have to worry about whether you can get your ball over the bridge and through the windmill in no more than seven shots.

The game comes with five 18-hole courses to choose from, and is designed to work on a variety of screens, including nine-inch monitors. Pick your course and enter the number of people who'll be playing. You can have a maximum of four people playing against each other in a competition. Ryder Cup it ain't, but great fun for the family it is.

Your club face is shown as a black line near the ball. Using the keyboard you rotate your club face around the ball until it's positioned at the correct angle. Press the space bar to draw the club back, and let go to swing. The further you pull the club back, the harder you hit the ball.

Simple, yeah? Well now you have to battle your way through a minefield of obstacles. The simplest of these are slopes, dips and hills. But danger lurks in the shape of the gopher who pops up to get in the way. You may, like me, be tempted to whack the ball hard at his head, but unfortunately his skull is made of titanium. When the gopher disappears, he leaves behind a hole. Beware: this hole will snare your ball up if you're not careful.

Once past those problems you are faced with hazards such as castles with drawbridges, pipes, and holes which swallow the ball only to spit it out somewhere completely and unexpectedly different.

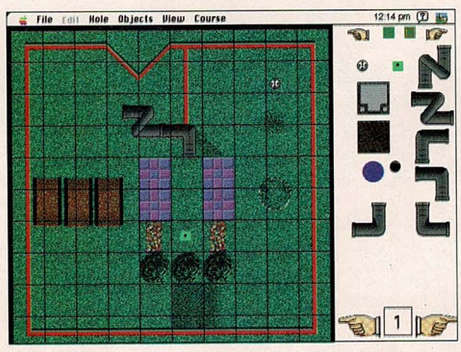


Pesky little critter! The gopher keeps popping his head up and leaving ball-engulfing holes all over the course.

There is just one thing that's going to spoil your fun. You can only play the first three holes of each course until you pay the shareware fee. This is hardly in the shareware ethos, but entirely understandable. The author has spent ages producing one of the best pieces of shareware I've seen, and this tactic will pay him handsomely.

Once you've paid the shareware fee you're able to use the course editor. This enables you to create your own holes, which is almost as much fun as playing the game. Because you can save your courses to disk, you can swap them with friends. Maybe we'll see courses appearing on the Internet.

The course editor is easy to use and you have access to use all the hazards and obstacles. Just like the game, it oozes professionalism and slickness and ensures longevity. This will be the best $15 you've ever spent.



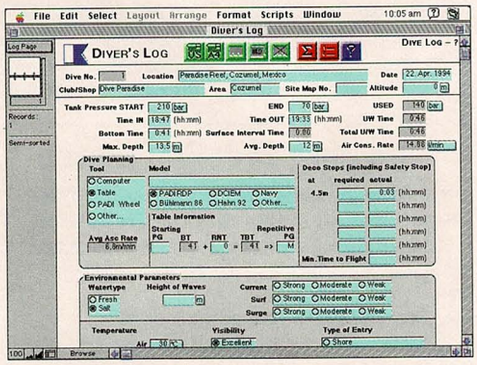
Once you have paid the shareware fee, you can design your own courses and set your own pars. This one's looking like a par 15.

Diver's Log

AQUATIC STATISTICS

Shareware $20

In my spare time I do like to do a bit of scuba diving (along with mountaineering, skydiving and crochet), so I was very interested in *Diver's Log*. It's a *FileMaker Pro 2* database file, so you need that program in order to open it.



Diver's Log is an excellent database but it isn't terribly flexible. For some reason the Height of Waves field wouldn't accept 'Really, really scary'.

Obviously written by an experienced diver, this keeps a log of every imaginable piece of data, including whether you wear lycra or not! But I'm not sure how many Mac-owning, *FileMaker Pro*-using divers we have among our readership because we stupidly forgot to include that question in our reader survey.

Apart from being very useful for divers, it is also an excellent example of how to use *FileMaker Pro* to create powerful databases. The author has used buttons and scripts to produce a professional product that you may well be inclined to pay for.

The main problem I encountered while using *Diver's Log* was that my PowerBook wasn't waterproof to 60 metres. I took it back to Dixons and complained, but they just laughed. Perhaps it was my lycra outfit.

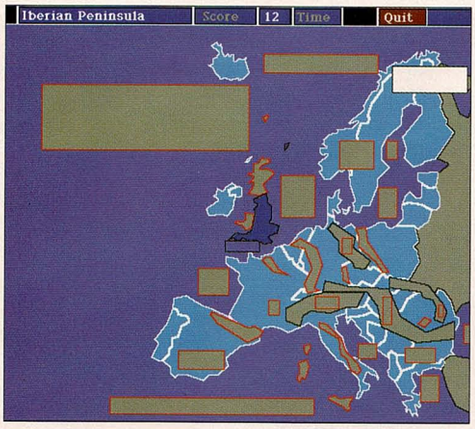
Europe

GEOGRAPHY

Shareware $12

Who said the Americans don't know anything about Europe? Actually it was me, but now you've got an opportunity to demonstrate your own ignorance. Unless you already know where the Gulf of Bothnia and the Bohemian Forest are, that is. I didn't. But I do now, and that's the important thing about this program. You really can learn from it.

You have a choice between four quizzes: countries, capitals, exports and major geographical features. Choose one and you are



Play *Europe* and learn about our friends across the water. Then we'll stop being accused of xenophobia by all those foreigners who are out to get us.

presented with a map a of Europe and then a series of 20 or so questions, asking you the location of various places most of which you won't know. You have to click the point on the map where you think or guess these places are.

At the end you get a score, and the correct answers are filled in on the map. It's a simple, solid program, but would be very useful for teaching a bit of geography. The desire to get a 100% score leads you to remember the information and actually learn something.

If I had a criticism, it would be that it needs a fifth category under the heading, 'Countries that Britain beat at war'. Questions could include, 'Which country did we whop at football and two world wars?' and 'Which country lost most of its ships on our rugged, wild coasts?'

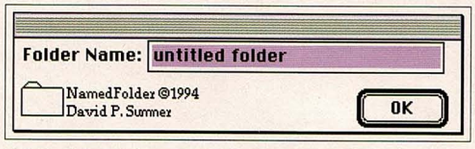
Erm, then again, perhaps the program will do just fine as it stands.

NamedFolder

EXTENSION

Freeware

Usually when you want a new folder you go to the **File** menu on the Desktop and choose **New Folder**. This creates a folder which you then name. *NamedFolder* is a very small, unpretentious program that is slightly more logical.



You don't want unnamed orphan folders do you? No, of course not, so get *NamedFolder* and call your folder... Gary.

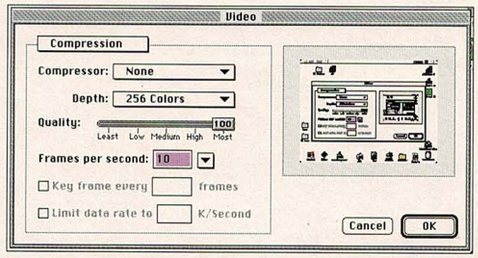
Pop it into your System Folder and restart. The next time you select **New Folder** a small dialogue box appears, into which you type the name you wish to give the folder. Press **[return]** or click **OK** to create your new folder. I'm not sure if this is any better than the usual method, but for those people who like customising their machine this is a must.

ScreenMovie 1.1

QUICKTIME UTILITY

Shareware $30

This utility addresses a problem I've had for a while, but doesn't quite solve it. On occasions I would like to record what's happening on my monitor as a *QuickTime* movie. This could be used for creating training films to explain how Macs work, for example.



With *ScreenMovie* you can record what happens on your monitor screen. Well, you could if it worked properly.

ScreenMovie attempts this most difficult of tasks, but just fails in its lack of sophistication. It has plenty of options, such as frames per second, size of movie, MIDI sound and compression. What it doesn't do is record mouse movements or pull-down menus.

To get a useable movie involves a reasonable amount of editing in another package anyway. This is because the program starts recording the screen as soon as you select **Start Recording**. So the first few seconds of the movie always show you going to the application menu and switching to the program that you want to record. This gets to be rather unimaginative and repetitive after a while.

This is a brave attempt at a very difficult and technical software task but, sadly, it just doesn't work. Let's hope that a later version will deliver the goods more successfully.

RAM Doubler Updater 1.5.1

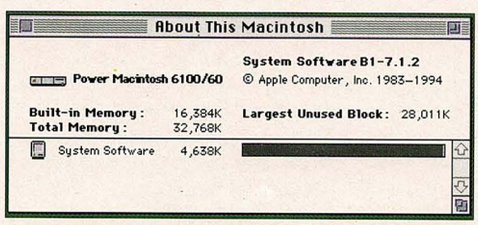
UPDATER

Freeware

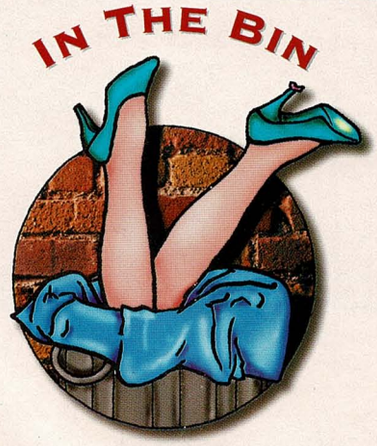
This is probably the first time we have featured an updater in the shareware pages, so I had better just explain what one is. You are probably well aware that every now and again companies launch updates of their programs with improvements. For instance, *ClarisWorks* version 3.0 will be available soon.

While you may be used to paying for these updates, some nice companies provide some updates for free. Connectix is one such nice company. If you originally purchased *RAM Doubler* for a Mac and then bought a PowerMac, you would have found out, perhaps much to your disgust, that *RAM Doubler* refuses to work with PowerMacs.

This freebie updater converts your copy of *RAM Doubler* to the latest version, which most certainly does work with PowerMacs. People who use *RAM Doubler* on a standard Mac will also want this because its effect is to fix a few other bugs and make System 7.5 work more



If you have the original *RAM Doubler*, you can now use it on a PowerMac with the updater.



SuperClamp

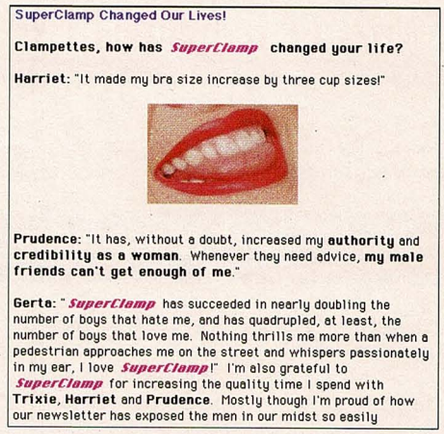
MAGAZINE

Freeware

Feminism on the 'Net? Oh dear. This US magazine (well it just would be, wouldn't it) is created using another shareware program, *DocMaker*. This is the same program that was used for the *Inside Mac Games* magazine on last month's CD. Unfortunately, that games mag had more intelligent things to say about life, the universe and everything than this publication.

Look hard and you'll find debates such as how the word 'beaver' became slang for the female genitalia. Fascinating. Also included are articles on eating junk food and attending slumber parties.

There is also a section of questions from male readers, including an enquiry about menstruation. There are some very odd people out there. The rest of the magazine consists of bizarre articles claiming that women are equal to men. Can you believe it? I only hope that good British ladies don't get hold of this sort of wild propaganda and start believing it. I was surprised there are any girlies on the Internet anyway, especially with their sense of navigation. *[Please note that Derek's views are not necessarily those of the magazine, nor anybody else's for that matter – Ed].*


SuperClamp Changed Our Lives!

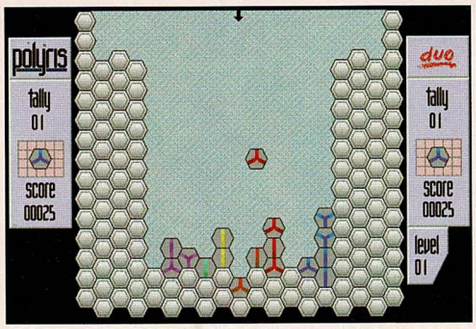
Clampettes, how has *SuperClamp* changed your life?

Harriet: "It made my bra size increase by three cup sizes!"

Prudence: "It has, without a doubt, increased my **authority** and **credibility as a woman**. Whenever they need advice, **my male friends can't get enough of me**."

Gerta: "***SuperClamp*** has succeeded in nearly doubling the number of boys that hate me, and has quadrupled, at least, the number of boys that love me. Nothing thrills me more than when a pedestrian approaches me on the street and whispers passionately in my ear, I love ***SuperClamp***!" I'm also grateful to ***SuperClamp*** for increasing the quality time I spend with **Trixie, Harriet** and **Prudence**. Mostly though I'm proud of how our newsletter has exposed the men in our midst so easily

SuperClamp brings rampant, left-wing feminism to the Internet. It shouldn't be allowed. Not that I feel threatened. And I'm perfectly confident about my masculinity, darlings. (Whoops!)



I'm not entirely sure why it is, but every time I play *Polyris* I want to yell, 'I'll have a P please Bob!'

smoothly than standard. Well done, Connectix. This really is a very useful little program.

Polyris Duo 1.0

PUZZLE GAME

Shareware $7

This is yet another *Tetris* like game, but is different enough to warrant more than a glance. Instead of blocks falling from the top of the screen, this time it's hexagons. Each hexagon has a coloured strip on it. It's your job to align the hexagons so that the strips join up to make a continuous line. Match up four hexagons and they disappear to make room for more.

The main difference between this and *Tetris*, is that *Tetris* was addictive and this isn't. *Polyris* is a fine game and kept me amused for an hour or so, but it's too easy. Either that or I'm a genius with lightning reactions. OK, it's too easy.

NoBalloonMenu

EXTENSION

Freeware

I've never liked that stupid Balloon Help. Nice idea, sort of, but it has never been used properly by software authors and is of virtually no use. This Extension kills it dead and removes the icon into the bargain. Hurrah.

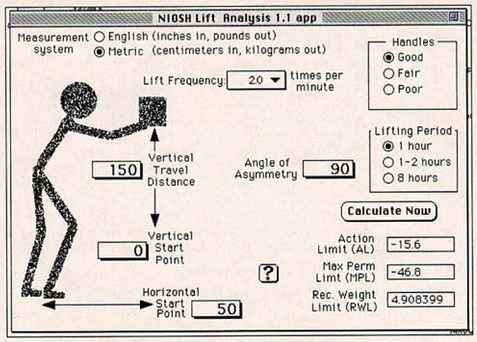
This will be of particular use to people with small monitors. Some programs fill the menu bar up, leaving no room for utilities such as *SuperClock*, which displays the time in the menu bar. This will be staying on my machine.

NIOSH Lift Analysis 1.1

SAFETY

Freeware

This is a crucial program for people who regularly find themselves lifting objects at a regular



Remember to practise safe lifting. Using this program I've now discovered that I can lift a pint glass to my mouth until two in the morning (at which point I fall over).

rate, over a known distance. Union leaders in factories all over the country should rush out to buy one... Once you've entered all the variables, the program does some number crunching and gives you some interesting figures – such as the maximum weight of an object that *x* ought to be lifting.

All well and good for safety, but there does seem to be one rather glaringly obvious problem. In almost all cases, you have no choice about the weight of the object you're lifting. I mean, if your job is to hump 25kg sacks around all day, you can hardly tell the foreman that your Mac says that the sacks are too heavy, and could he reduce them to 18.7kg?

This seems to be a triumph of nanny society over real life common sense. The program also doesn't take into account the gender or size of the person doing the lifting. I mean, a big butch person like me could lift elephants all day. (I do hope this magazine never prints our photos.)

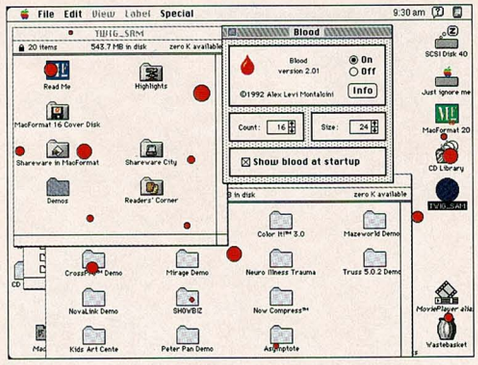
Blood

DONOR UTILITY

Freeware

Pop this Control Panel into your System Folder and restart your Mac to enjoy this unique experience. Unique in the sense that nobody else would bother writing something so eminently crap. What it does is randomly create drops of blood on screen. These are always at the front no matter what application you open.

In case they are in your way, you can drag them about with the mouse. Exciting or what? I like stupid utilities as much as the next sad and lonely person, but I expected a bit more Transylvanianesque gory fun. The blood slowly dripping down the screen, for instance. Now that would be worthwhile. Then you could imagine that you've just killed a chicken and



With *Blood* you can simulate your Mac having a nasty shaving accident. This Control Panel will stay in your System Folder for, oh, at least three minutes.

ripped out its insides with your bare teeth. Erm, possibly. Not that I would.

BranChing 1.56

ROOT ANALYSIS

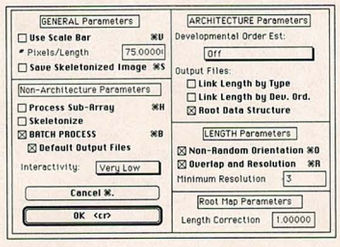
Freeware

This is a root analysing program. It analyses root structures. Two dimensional ones. No, seriously. Although it can create basic artificial root structures, the idea is that you analyse pictures created elsewhere. OK, I thought, I'm game. I dug up my aunt's petunia and shook out the dirt clods. Getting it to fit on the scanner was a bit tricky, but soon I had my scan.

The next step was to load the image into *BranChing* and ask for a complete root analysis. Two minutes later the program came back with the following analysis: 'I think you've just killed your aunt's petunia.' Stunning.

After reading the instructions (always a good last-ditch tactic), I gathered that the program is designed to perform simple measurements of root-like structures drawn in graphic packages. I'm not sure how wide an appeal this will have to the Mac community but I suppose shareware is all about filling vital gaps. Funnily enough, the chap I borrowed the scanner from said something about filling in my gaps. I wonder what that's about?

Derek Smith



It wasn't until I got to use *BranChing* that I realised just how simple it was to analyse root structure. I think I'll just process that sub-array.

YOUR ALMOST COMPLETE GUIDE TO SHAREWARE

Shareware is a form of 'try before you buy' software selling and it's a great idea so long as people are honest. When you get some shareware, the documentation will tell you how much it costs – typically it's somewhere between $5 and $40 – and where to send your money. If you like the software and decide to keep it, then you are morally obliged to cough up. Not only do you get the satisfaction of boasting to friends about how honest you are, but the author will often give you something in return, like a printed manual, or updates when released. The most common problem is sending money abroad, but as many shareware authors now accept credit cards, it's getting easier.

Freeware means that you don't have to pay for it at all. There are many derivations such as postcardware, which means that you have to send a pretty postcard to the author. However, freeware is not the same as Public Domain (PD) because although you don't pay for freeware, the author keeps copyright and you have to follow his terms and conditions to use the program. This often means keeping all the files together and not using or selling them for profit.

ALL PRICES INCLUDE VAT & DELIVERY – NO HIDDEN EXTRAS

MACFORMAT promotions

Once again MACFORMAT has searched high and low to bring you the best Mac products at the best prices...

Style victims

Yes, you too can be the proud wearer of one of these strictly limited edition MACFORMAT T-shirts. Styled in a fetching dark blue with an ultra-trendy Apple logo, they're the ideal fashion item. They're not only eye-catching, but you'll also impress your friends with your Mac knowledge.

MACFORMAT T-Shirt
Price: £9.95
Order code: MACFTSL (large)
(Sorry, no other sizes currently available)

600Mb of programs!

The BMUG PD ROM contains over 600Mb of the best shareware software from all over the world, collected by the Berkeley Macintosh Users Group and put on one CD-ROM (1994 edition).

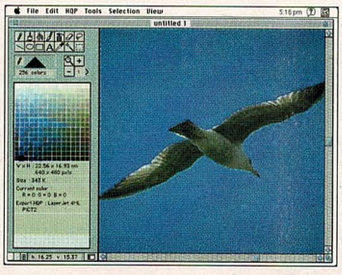
BMUG PD ROM CD
Price: £39.95
Order code: MFBMUGCD

THE MACFORMAT STAR BUYS

These are four of the best programs that MACFORMAT has ever seen. We are proud to be able to offer these special products direct to you from our magazine. Fill in the order form and get your copy of these essential programs to make your Mac more fun.

ColorStation 2

(MACFORMAT 13: 90%)
Other software producers could certainly learn a thing or two about ease of use and value for money from Le Pixel. It's hard to fault *ColorStation*. With its straightforward controls, this is an excellent choice for novice

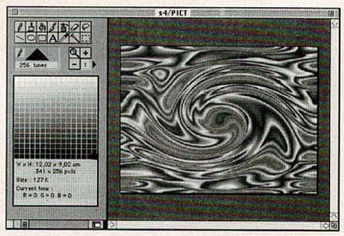


DTPers, covering all the graphics and printing bases in a convenient one-stop program.

Price: £49.95
Order code: MFCOLS

GrayStation 2

GrayStation is a kind of mini-*Photoshop* for greyscale images. *GrayStation* enables you to take

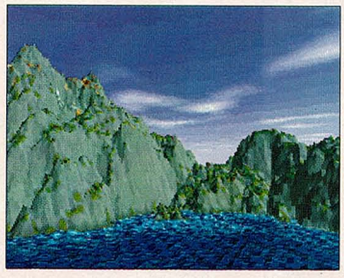


an original image and edit it, altering brightness and contrast. Using the program's own unique High Quality Print system, you can create superlative images that print out better than ordinary scans – even on cheap printers.

Price: £39.95
Order code: MFGRAY

Vistapro

(MACFORMAT 15: 90%)
With *Vistapro* you can create your



own landscapes including trees, clouds, rivers, oceans, waves and buildings. Its sheer versatility is breath-taking and the results will stun you. *Vistapro* is a wonderful program that grabs you in much the same way as an addictive game.

Price: £89.95
Order code: MFVIST

Redshift

(MACFORMAT 13: 95%)
Redshift is the best astronomy program there is, and it will provide hours of fascination for anyone with even the slightest interest in star gazing. It's a brilliantly conceived and excellently presented CD, with some genuinely innovative features. It's all that a budding astronomer needs.

Price: £59.95
Order code: MFREDS

ORDER NOW! CALL THE HOTLINE ON 0225 822511

Need help with ClarisWorks?

If you need to know more than the manual tells you, then try this Black Mouse guide to *ClarisWorks*. Inside you'll find pages of practical advice and worked examples to help you get the most from your software. Special MACFORMAT offer – £2 off RRP.

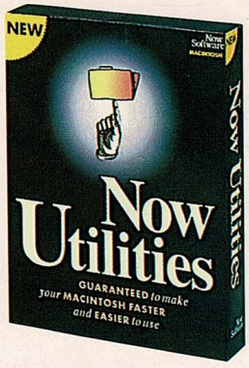
ClarisWorks book
Price: £7.95
Order code: MFCWKB

The essential shareware collection

No fewer than ten high density disks, packed with the very best shareware and freeware programs. No demos, just top-notch shareware software. Too many to list, but included are the latest versions of: *Disinfectant, SoundMaster, Apollo, BeHierarchic, FileTyper, Maelstrom, Graphic Converter*, and over 100 more. All programs work with System 7 and a colour monitor – some require them. Ten disks for just £19.95!

Shareware collection vols 1-10
Price: £19.95
Order code: MFSHARE1

Now Utilities version 5.0



Improve the way you use your Mac with this collection of nine superb utilities. With access to all recently used files and applications, as well as pop-up menus for your folders, you can quickly navigate around the Desktop. You can also save hard disk space with automatic file compression. See our review last issue, try the demo on the CD, then buy it at this special introductory price.

Now Utilities v 5.0
Price: £60.99
Order code: MFNOW5

Excel, Word and FileMaker help

In the same series of Black Mouse guides are books teaching you the best of Microsoft *Excel 4*, Claris *FileMaker Pro* and Microsoft *Word 5*. All are available at the same bargain price.

FileMaker Pro book
Price: £7.95
Order code: MFFMPB
Microsoft Word book
Price: £7.95
Order code: MFWD5B
Microsoft Excel book
Price: £7.95
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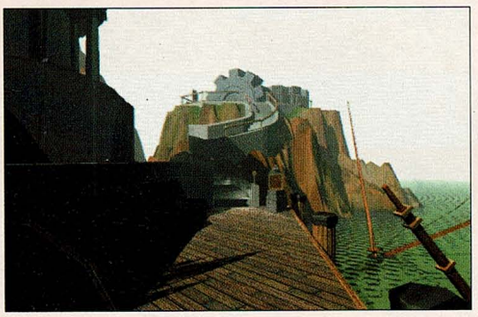


Myst

(MACFORMAT 9: 95%)

An adventure that has you exploring an island world with enthralling puzzles to solve and luscious visuals. This graphics extravaganza comes to you on CD-ROM.

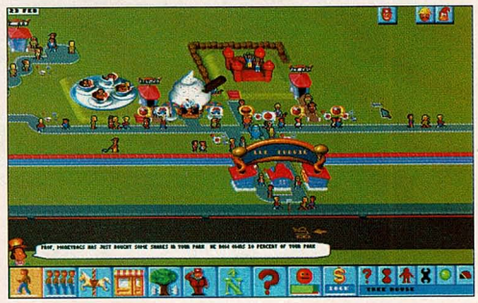
Myst
Price: £39.95
Order code: MFMYST

Exclusive HyperStudio offer

We were so impressed with *HyperStudio*, and its ability to enable any Mac user to create multimedia, that we got together with the UK distributors TAG Developments to offer MACFORMAT readers an exclusive deal on the software. We can offer you *HyperStudio* at the special price of £117 – that's almost £50 less than the recommended retail price. For just £117 you can be creating multimedia masterpieces in moments (sorry).

This offer is strictly time-limited, so apply now to get your copy at this special MACFORMAT price before it resumes its normal £165 price.

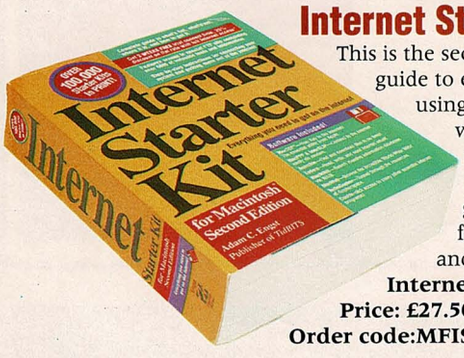
HyperStudio
Price: £117
Order code: MFHYPER



Theme Park

Your chance to build the theme park of your dreams. Construct the best stomach-churning rides, provide oodles of ice cream and hotdogs, please all the customers and make loads of money. See the review in MACFORMAT 18, and then take advantage of this stonking offer to get your very own copy.

Theme Park
Price: £29.99
Order code: MFTPARK

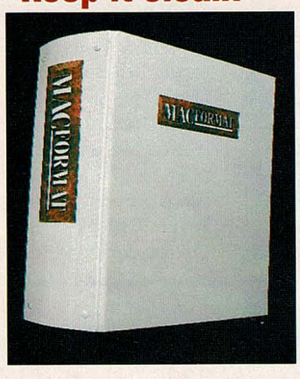


Internet Starter Kit

This is the second edition of this indispensable guide to everything you need to know about using the 'Net. The book comes complete with The Internet Starter Kit disk, which is packed full of useful software. Inside you'll find practical guidance on how to get the most from the 'Net without going bankrupt, and where to look for all the latest info.

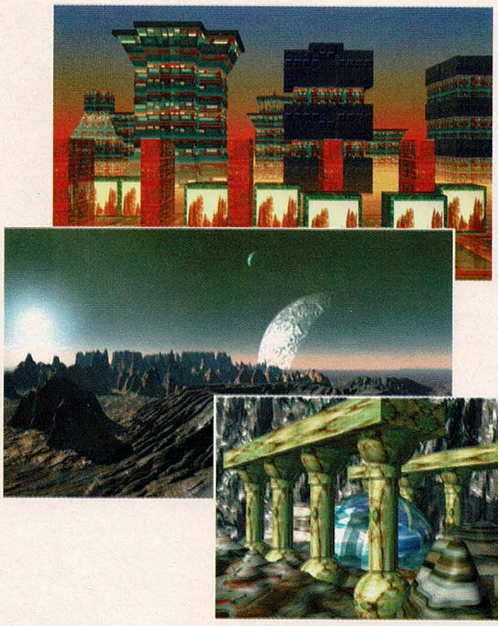
Internet Starter Kit second edition
Price: £27.50
Order code:MFISKIT

Keep it clean!

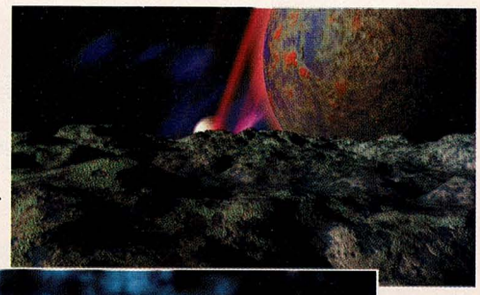


Regular readers will now have over a year's worth of MACFORMATS on the shelf, so to keep them tidy and in absolutely top condition, why not store them in a specially designed MACFORMAT binder? Adorned with the MACFORMAT logo, the binder will keep your MACFORMAT issues in perfect nick.

Binder
Price: £6.50
Order code: MFBIND



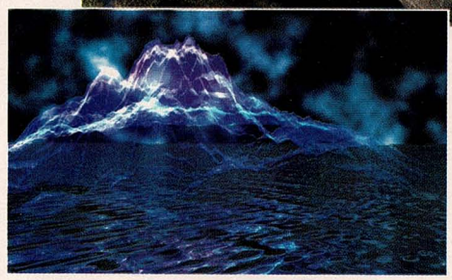
KPT Bryce SAVE over £35 on RRP



Produce the most incredible landscapes imaginable on your Macintosh with the superb *KPT Bryce*. You have complete control over the shape and form of your terrain. Clouds obey your every mouse-click and a storm can be conjured up in seconds. Journey into deep space and visit unknown planets and their mysterious moons. With the ability to control reflection, it's simple to produce truly professional images. Your only limitation is your imagination...

Once you've started to use *Bryce* you will be hooked and unable to stop creating wonderful graphics. Reviewed in this issue, *KPT Bryce* gets a impressive 91%. It requires an LCII or better, 4Mb of free RAM, and System 7 or later.

KPT Bryce
Price: £115.00
Order code: MFKPT



The silliest software ever!

UnderWare is a screen-saver, and it can customise the desktop background, but it's much more than that. It's fun. In fact it's downright silly. *UnderWare* animates the screen as you work! Tarzan swings in and collides with the window, a thief makes off with your 68000, babies crawl everywhere, a dragon burns holes in the desktop and so on. It even runs *After Dark* modules in the same way. *UnderWare* has to be the ultimate Mac customiser! We gave it 93% in February's issue. Imported direct from the US, where it costs $59.95, MACFORMAT brings you total silliness for just £34.95.

UnderWare
Price: £34.95
Order Code: MFUNDER

The ultimate value modem

We rate the US Robotics Mac & Fax as one of the best modems around, and now that USR has slashed its prices, we can bring it to you for an extraordinary £200. Only six months ago, it was £469!

The Mac & Fax is a super-fast modem that can transfer data at up to 56,000 bits per second – 20 times as fast as a typical 2400 modem. It does this by combining raw speed (14,400 baud) with the v32 compression system which shrinks the data before sending it. The modem works with any on-line service and comes complete with a Mac cable and all the software you need to access computers worldwide.

As well as being a modem, the Mac & Fax includes software that enables you to send faxes direct from your Mac, simply by printing from your document as normal, and the Mac & Fax can receive faxes too.

All in all then, it's pretty fab and you definitely shouldn't be without it. Our price for this remarkable piece of kit? Only £200!

US Robotics Mac & Fax modem
Price: £200
Order code: MFMODEM

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PowerMonger

Enter a world where might is right, where men live – or die – by the sword. You're a medieval army captain. Your job: world domination...

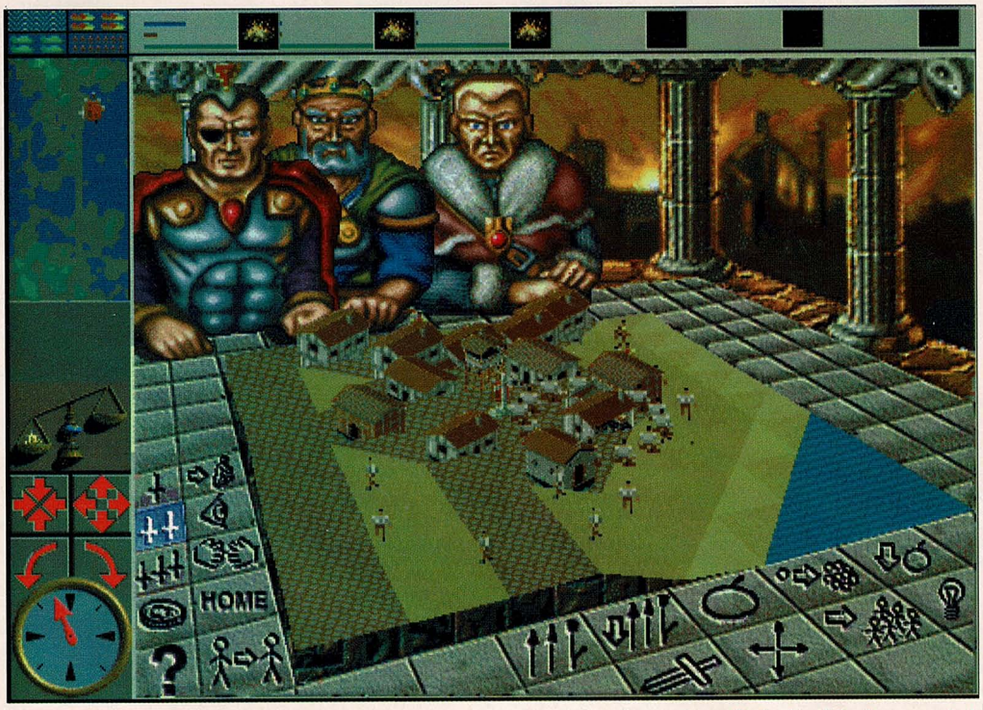
*Power*Monger? Iron, fish and costards we're pretty sure about, but power? How exactly do you monger that? I suppose you'd begin by stalking around the siege encampment wearing a breastplate and an evil frown, snarling: 'The snivelling curs! We attack at dawn.' Because Bullfrog's game is about medieval strategy and conquest. As an army captain, you monger power through the gentle art of persuasion. Or through the less subtle but more satisfying art of spilling gallons of enemy blood with broadswords, crossbows and catapults...

You and your barbaric band of swordsmen start the campaign on a nondescript island in the top left-hand corner of the map. The aim is to take control of the whole world by conquering each island, and with 195 of them it's going to take a long time to complete. To win control of a particular territory, you have to 'persuade' at least two thirds of the populace that being on your side is a good idea. This persuasion can take varying degrees of violence and subtlety, which you can set by using the icons at the bottom of the screen. The screen layout initially looks daunting as the numerous icons surrounding the isometric 3D views of the island's terrain aren't immediately friendly, which rather defeats the object of having 'simpler' icons.

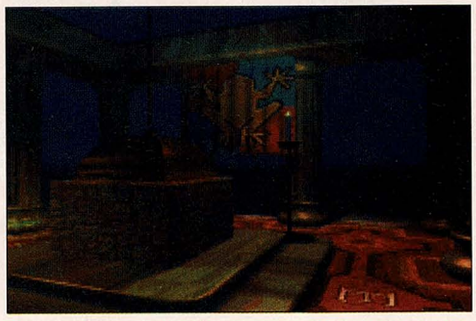
After half an hour or so with the manual, however, you'll soon be pointing and clicking with the greatest of ease. And your men will be rampaging round the countryside with a gay abandon not seen since William the Conqueror got a walk-over win in his 1066 Tour of Britain.

If you think the townsfolk will be receptive to a little gentle persuasion, you can tell your men to lay off the heavy stuff. But if the population starts cutting up rough, you can order your men to hack everyone to bits. (Literally, 'cutting up rough'.) You give your instructions via a captain who's on the ground with the troops. And you'll soon find that the game's far more complex than just wading in to town after town brandishing your swords.

The attacking and pillaging approach to conquering will probably be your first choice because it immediately appeals to the sadistic butcher in all of us. But it's not necessarily the swiftest or most effective way to achieve victory. Rest back on those laurels, plan your attacks, and adopt a strategy. Before attacking a town your troops may have to set up camp and



The battleground is surveyed by three captains as the troops settle down for a well-earned rest. On the later islands, you control several different groups of men via the captains and things start to get pretty hectic.



The game has a moderately impressive intro which zooms in on a barbecue-style lid, which lifts...

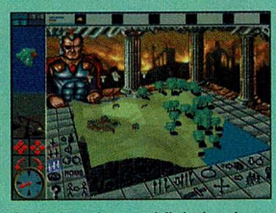
A ZOOM WITH A VIEW

As the commander of various and diverse bands of men, it's important to check out all your targets before you attack, so that you can plan your total stranglehold. *PowerMonger* is user-friendly enough to give plenty of viewing options so that you can pinpoint every last detail.

The hilly terrain in *PowerMonger's* 195 islands may be picturesque but it often leaves you with a view that's obscured by one of said hills.

Use the Rotate icon to spin the view round so you can spot your potential target's strengths and weaknesses. Then you'll know for sure if it is worth attacking.

When your troops arrive, you can zoom in to get a close-up view of the action, and to see the angels flutter up in those charming little nightdresses that they all wear.



And when the good fight has been won, you can zoom right out to see how much carnage you've caused. Angelic choirs, the lot – what a beautiful sight.

WHATEVER THE WEATHER, KILL 'EM!

"Bring me sunshine, in your smile, bring me laughter, while I cleave your head in two with my broadsword." Sunny days are happy days (but not for everyone).

It could just be like the famous scene in A Clockwork Orange: brutal violence combined with Gene Kelly's Singing in the Rain. Dah-dah-dah dar...

Christmas time down on the farm: snow fell softly and everything was peaceful. Then the villagers realised their enemies had infiltrated them by boat.

gather food to boost their strength and morale, or recruit more men to bolster their numbers.

On the more complicated islands, significantly more advanced strategies are required. You have to devote manpower to inventing and manufacturing objects (swords, bows, siege engines and boats, for example), but your production possibilities depend on the raw materials that can be found in the vicinity.

If you're too lazy to produce your own weapons (you'd have to be pretty stupid as well, but it has been known), you can try trading and forming alliances with other tribes on the island. Food, weapons and non-military items can all be bartered. If you're sly you can form an alliance against a third party, but then just think what the computer players are plotting against you...

PowerMonger has been released on almost as many formats as *Tetris*, and it's a bit of a surprise that the Nintendo GameBoy hasn't had a look in somewhere along the way. Atari ST, PC and Sega Mega Drive have all seen versions of the game – it was originally released on the Commodore Amiga way back in 1990. In terms of graphics, the Mac version is one of the best, with all the neat touches that made it so appealing on other formats.

Be wary of towns that have troops who march around in formation – they're bound to be tough to beat.

Oh dear, there seems to be a bit of a bloodbath in progress. At least they seem to have left the sheep alone. For now...

The game's far more complex than just wading into town after town brandishing swords.

When an unfortunate soldier or citizen finds himself (or herself) on the wrong end of a steel blade, a little angel flutters heavenwards. When a child is born in a city a stork flaps overhead and drops a little bundle of joy down a chimney. *PowerMonger* also recreates the numerous weather effects of the changing seasons, giving the impression of a living, breathing world.

You'd be right to be wary of a game that's taken so long to see the light of day on the Mac, but *PowerMonger* is just as good to play now as it was in the beginning. Its strength lies in its well-tuned strategy, which gets ever more involving and complicated. It doesn't rely on flashy graphics and fancy video sequences to give you a cheap thrill – it's good old-fashioned gameplay that provides you with an enjoyable and long-lasting challenge. *Richard Longhurst*

... to reveal the playing area. Don't worry about this gobbling up your hard disk – the game and the intro only take up 4Mb.

When you come across a big town such as this, it's best not to go storming in. Try sending your captain in as a spy while the rest of your troops set about inventing siege equipment.

After razing the village to the ground and butchering the hapless inhabitants, your troops huddle round the campfire for a good old sing-song. While you still stand there...

POWERMONGER

Price: £39.99 RRP. Out: now
Requires: LCII or better, System 7.0 or later, 4Mb hard disk space. Colour and monochrome supported.
For more details contact Electronic Arts on 01753 549442.

Graphics 88%
Highly detailed, with loads of neat animations.

Sound 80%
Effects vary depending upon what you're looking at.

Gameplay 86%
Challenging, engrossing, but marred by an occasionally fiddly control system.

MACFORMAT RATING 87%

Eat my Photons

Flight sim or shoot-'em-up? The game's confused and so's Frank O'Connor, but at least it's clear on how to deal with the aliens... ZAP!

Aimed very much at the dribbling loony end of the market, *Eat my Photons* features the first fully-fledged xenophobic rampage for the Mac. Actually, it would be fairer to describe this as a cross between *Star Raiders* and *Battlezone*. Both are classic games, so you might think this would be too. Sadly, no. It's a little trickier than that.

The manual begins with some advice stating that hardcore gamers shouldn't bother reading any further. This would be foolish. For all its arcade pretensions, *Eat my Photons* actually has a lot more in common with a simulator – hideously difficult controls and a lot of them.

Ah, yes. Now pay attention. Here we have a couple of aliens. And you've got to shoot them down. Gung ho!

Look out, it's another alien. And you've got to shoot it down. Hang on a minute, haven't we just said that?

The soft and tender underbelly of the enemy – you have it in your sights. You know what to do, so don't hang about!

The plot. Oh dear, not much of one. And I quote: 'The enemy fleet is invading your sector, and you are the colony's last defence.' Ahem, surely they could have embroidered this rather slipshod storyline somewhat. I mean, what colony? Who are the enemy?

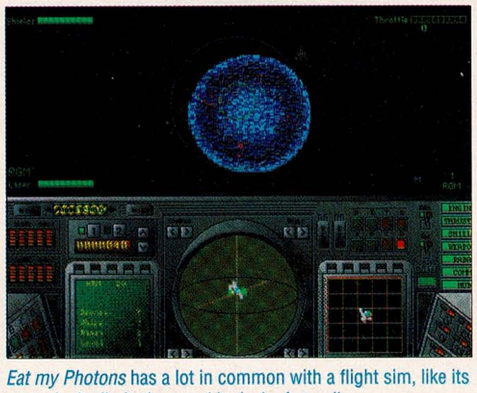
The game is composed of two very distinct gameplay styles: one takes place on terra firma, the other is an airy shoot-'em-up. The main problem is that both game scenarios have their own distinct and irritating foibles. The sense of disorientation in the air is matched by the sluggish control on the ground. In an ideal world, both game styles would offer great things in terms of playability.

Again, the complicated nature of the gameplay seems out of place with the gung-ho mentality of the proceedings. Sure, there's a lot going on, but targeting drones and then shooting things with missiles is all very reminiscent of a typical flight simulator.

You have the usual simulator range of radar head-up displays and targeting systems. The craft you control responds to the slightest movement of the mouse, with huge momentum after a direction's selected.

When you start each round you're given the choice of Stellar or Ground missions. Simply destroy all the targets in each mission scenario and you move on to the next. At this point, bonuses and scores come into play. The incredibly valuable missiles are restocked after the completion of a mission and not before. Using lasers is pretty much the best bet, and certainly more efficient in terms of ammunition. But blasting the more powerful installations with weedy lasers is not recommended.

Graphically, *Eat my Photons* isn't going to blow anyone away. Very average polygon graphics look positively dull in the stellar sections. Only the ground-based missions offer any kind of aesthetic treat in this maelstrom of dreariness. The movement is smooth enough on a decent Mac, but you'll need an LC475 or better to get the most from it.



Eat my Photons has a lot in common with a flight sim, like its controls, its limitations and its lack of storyline...

For the sections on terra firma, this scenic shot is about as good as it gets. You can turn off even more detail if you like.

Controls on the ground are sluggish, which can make shooting down your enemies in a xenophobic frenzy a frustrating business.

You do get a comprehensive customisation screen, enabling you to change the level of scenery detail and completely remove the static bitmapped horizon. Turning off ground detail makes the most noticeable difference, but with all that stuff removed you now have a very pedestrian looking product.

A lot of work has gone into the sound and music, but some of the tunes are just plain annoying. The music is context sensitive and increases in dramatic effect as you encounter danger, but the annoying drone of the engine does little to enhance the atmosphere.

In a further sad attempt to give this game some flight-simulator-style cred, you're also equipped with chaff, enabling you to confuse and deflect enemy missiles.

This is not a simple action game, as claimed. Neithegar is it a decent flight simulator. It falls between the two styles, and it's not a happy hybrid. If you want to shoot stuff get *Sensory Overload* or *Spectre*. If you want to fly planes, try a flight sim. Whichever way you look at it, this is not a very good game. *Frank O'Connor*

EAT MY PHOTONS

Price: £35.24. Out: now.
Requires: LC or better, System 7 or later, at least 3Mb of free RAM.
For more details contact Computer Warehouse on 071 724 4104.

Graphics 67%
Nice flat polygons, but somewhat dated these days.

Sound 78%
Very well produced, but sometimes grating.

Gameplay 65%
Confused. Not nearly as much fun as it looks or sounds.

MACFORMAT RATING 66%

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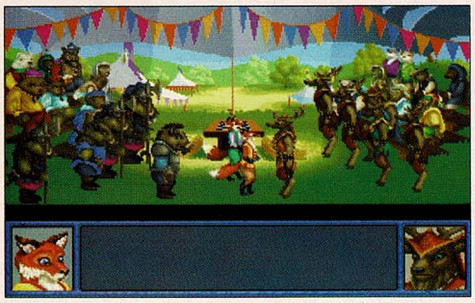
Inherit the Earth

An innocent Disney-esque fox is accused of grand theft. Jonathan Davies helps him on his quest to recover the stolen Orb to clear his name.



What began as a nice day out has turned into a disaster: the Orb of Storms has been nicked and you're the prime suspect.

You can stop and chat to anyone along the way. The bears are a bit on the dim side though – some chats can drag on.

If you click on 'Look At' and then click on a window you'll get a sarcastic reply like 'what a handsome window'.

If you can't sneak past the castle's guards, don't worry, just bribe them! They're suckers for a bit of juicy gossip.

Disguise yourself as a rat and look for clues in the library. But don't talk to anyone or you might give yourself away.

There's something slightly unappealing about the packaging of this game. It shows a fox, a boar and an elk dressed up in tunics and heading off on some sort of adventure (a quest for an Orb, to go by the subtitle). They're not particularly badly drawn or anything, but somehow they've got a faded air about them that suggests the game's been sitting unsold in the shop for several months. It won't have been, of course, because *Inherit The Earth* is a brand new game that takes full advantage of the stunning interactive world of CD-ROM. But that's the way it looks. Tsk.

As it transpires, the fox, the boar and the elk are the stars of the game. They inhabit a world in which, in a kind of sub-*Planet of the Apes* scenario, the human race has endowed all the animals with the gifts of speech and self-awareness, and then mysteriously disappeared from the planet. Did they leave through choice? Or did something more sinister happen? No one seems sure, but whatever the reason, it makes a refreshing change from the usual dreary old scenarios where humanity wipes itself out with nuclear weapons, suffocates under its own pollution or melts the polar ice-caps.

A lengthy and rather tedious introduction unfolds to reveal that the Orb of Storms has been stolen. The fox (whom you get to play) is the prime suspect, so he volunteers to prove his innocence by finding the true culprit and retrieving it. The villagers agree but decide to hold his girlfriend captive to make sure he comes back.

It's all a bit twee, but the playing environment is pleasingly cohesive, with the various animal species each having their own characteristics. The elks are the noble rulers, for example, while the boars are aggressive and rude, and the bears are amiable but a bit dim. The foxes, meanwhile, are regarded as sly and untrustworthy, which is why you've been suspected of stealing the Orb in the first place (but they're all right really, of course).

The graphics are attractive too. The view alternates between an isometric 3D one, when you're exploring villages and castles etc, and a 2D one when you enter buildings. All the characters are neatly drawn and animated, and the scenery varies to provide a range of atmospheres, from pleasant woodland to mysterious rat tunnels and scary castles.

The power of CD-ROM is unleashed to provide spoken dialogue, enabling you to have conversations with any of the characters you meet. The parts are all well-acted, avoiding the embarrassing amateurish stuff you often get with this sort of thing. The dialogue is reasonably entertaining, although some of the speeches can drag on a bit. Mediaeval-style music tinkles away in the background until you lunge for the 'off' control.

No, it's not a kinky mud wrestling session. The king is slobbing around in the mud gloating over the fact that he has your woman and there's nothing you can do about it.

The point-'n'-click interface is easy to use. You just click on a word from the list at the bottom of the screen, and then click on whichever object you want to use. The manual is more or less redundant, which is a good thing as it has that damn picture of the cute little animals on it again.

Basically, *Inherit the Earth* is pretty good, and much better than the packaging would have you believe. At least, it's slickly produced. But... I dunno. For some reason I didn't find myself captivated by the storyline, or particularly caring whether the fox found his Orb or not.

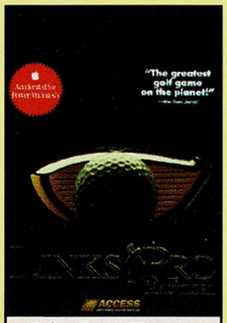
Maybe it's a game more aimed at children (although it doesn't claim to be). But I'd like to see the fox and his chums armed with crossbows and spears, cutting a swathe through the woodland as they hunt down those villains, rather than being so stickily nice to everyone.

That's probably just me, though. Buy *Inherit the Earth* and be merry. *Jonathan Davies*

INHERIT THE EARTH

Price: £39.99. Out: now.
Requires: colour Mac, System 6.0.7 or later, 3Mb of RAM, 1Mb of hard drive space, 32-bit QuickDraw and a CD-ROM drive. Quadra or Performa recommended.
For more details contact US Gold on 021 606 1800.

Graphics Pretty, in a rustic sort of way.	85%
Sound Top-quality voice recordings, but irritating tinkly medieval music.	75%
Gameplay All works fine, but a little humdrum.	78%
MACFORMAT RATING	81%



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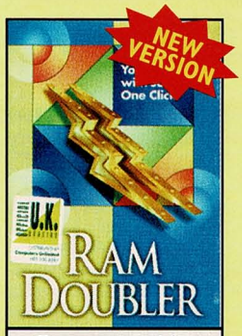

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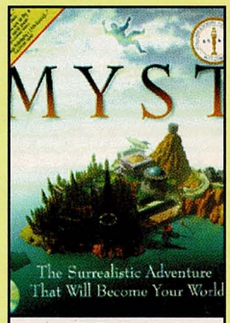

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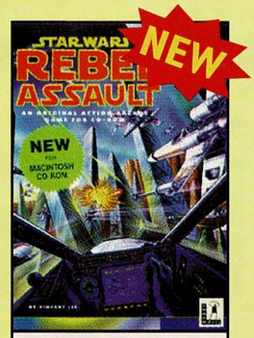

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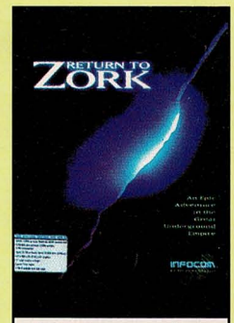

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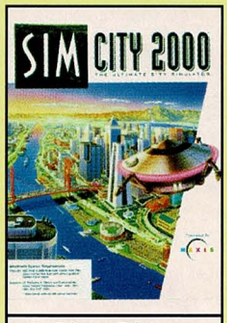

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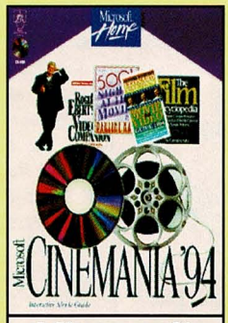

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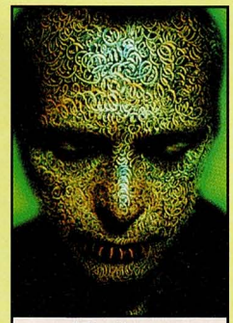

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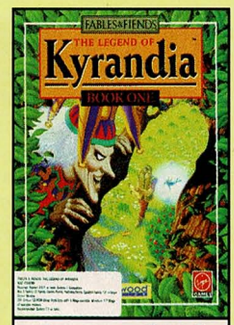

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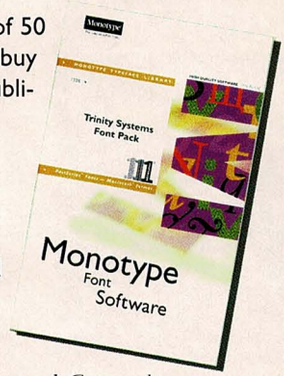

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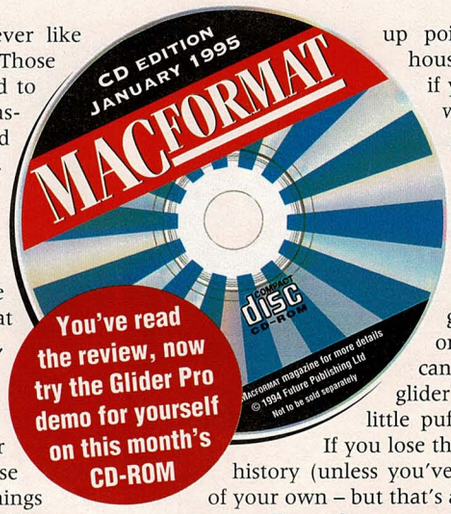
Trinity

Glider Pro

Top Gun it's not, but you'll learn how to fly loops around the lampshade. *Flyer* magazine Editor and pilot Martin Le Poidevin plays with paper darts.

Paper aeroplanes were never like this when I was a lad. Those things my classmates used to throw while the Latin master's back was turned, inscribed with the words 'Suscipe illud, amice' ('Take that, pal'), were never, as far as I was aware, likely to feature in a computer program.

Well, I've been proven wrong. Not once, but twice. Somewhere out there there's some software that can help you to design paper darts, and then there's *Glider Pro*, which teaches you how to fly them. Well, sort of, anyway. It's a platform game and the aim is to get your paper aeroplane through a house packed full of challenges, doing things like picking up magic stars and avoiding nasties. To keep your glider/dart/paper aeroplane airborne, you must position it over air vents, candles, or anything that creates an updraft. Hover as high as you can over one of these (they each have a different high-hover factor), then glide gracefully down to the next one, and the next, and the next, and so on.


CD EDITION
JANUARY 1995
MACFORMAT
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MACFORMAT magazine for more details
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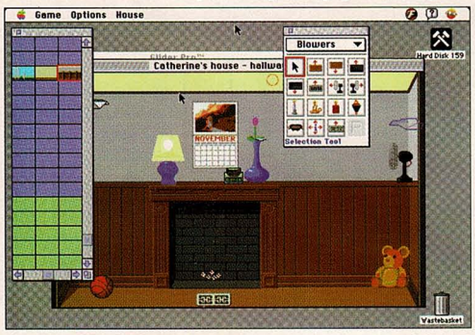
Not to be sold separately
You've read the review, now try the Glider Pro demo for yourself on this month's CD-ROM

It's a bit like life, really: you have your ups and downs. While you're gliding you can pick up points by touching household items. But if you do something wrong – such as get hit by a balloon or a piece of toast, fail to make it to the next air vent, candle or anything else that gives an updraft, or get singed by a candle – then your glider dissolves in a little puff of glittery dust. If you lose three gliders, you're history (unless you've built some more of your own – but that's another story).

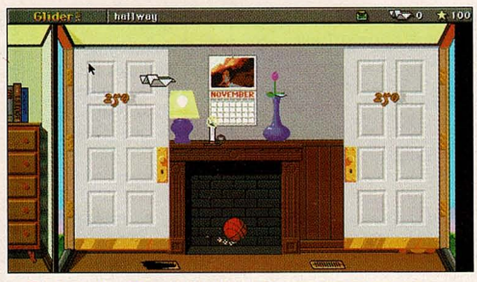


Using the Room Editor you can design your own room, or even a whole house. But don't forget to put some exits in...

As in all good games of this genre, the puzzles and tricky bits crop up just irregularly enough to keep you coming back for more. The controls are simple and the graphics are very smooth. Unless you've been brought up in the computer game culture the sounds might get on your nerves after a while, but you can, of course, turn them off.

The game comes with one complete house for you to fly through. It's not much, but there is an escape clause which is where the fun can really start. All too often, games of this sort come with an extra-levels editor that is totally impenetrable; it's what the original creator used and it's been bunged on to the disk as an afterthought to add some value.

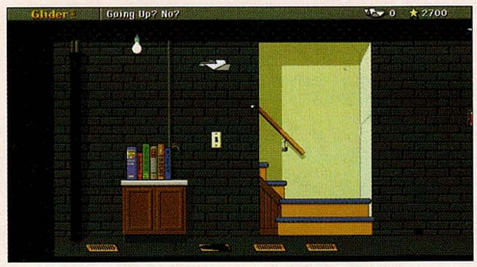
Not in this case. The *Glider Pro* Room Editor is easy to use, and it doesn't take any effort to create not just one 'room' (which can be outside, upstairs or in the basement) but a whole house. When you've selected the room's style, you can add furniture, blowers, nasties and bonuses to it as you wish. The entertainment comes from concocting fiendish puzzles, then sitting back and watching your friends sweat and swear their way through them, cursing you all the while. Smug, that's the word.



...That's better. But see that the blowers and prizes are correctly positioned to make the game worthwhile.

You can add rooms to your heart's content. Fill 'em with nicies and nasties to make some heart-stopping action.

Fly around the rooms searching for magic stars. Look out for the switches – this one turns on the music. Fancy a dance?



And if you fly into the cellar don't forget to flick the light switch, otherwise you'll find yourself in the dark.

You can set up switches that turn the blowers on and off, not just in the current room but in others too. Be warned: there's nothing more frustrating than hovering over a vent only to find you turned it off three rooms previously...

There is a two-player option, but unless you're a saint, forget it, because this is a 'co-operation' exercise. Playing two-up will only lead to more acrimony than the normal head-to-head two-player option as one player destroys the previous player's good work.

OK, so the game's nicely put together, and it would be churlish to moan about the graphics, the sound or the Room Editor, all of which are excellent. Once you've started, it's as addictive as any other top-class platform game, and there are a few amusing moments that give you a good feeling about the whole thing.

However, there is nothing really new in *Glider Pro*. If you enjoy creating puzzles and trying them out on your friends then it's for you. But if you like value for money in your games, without having to work for it, then best avoid it. The Slumberland house that comes on the disk just isn't enough. *Martin Le Poidevin*

GLIDER PRO

Price: $77.45 (inc. handling and shipping). Out: now.
Requires: LC or better, System 7 or later and a monitor that displays 16 shades of grey or 256 colours.
For more details contact Casady and Greene on 0101 408 484 9228.

Graphics Smooth and efficient, but nothing exciting.	85%
Sound Usual platform problem – it gets on your nerves after a while.	75%
Gameplay Solid stuff. Fun if you can get into it.	79%
MACFORMAT RATING	80%

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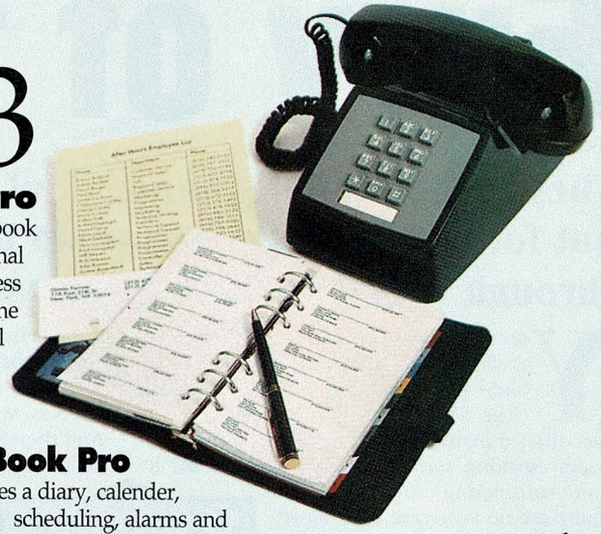

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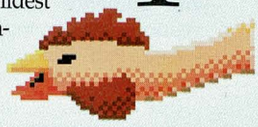
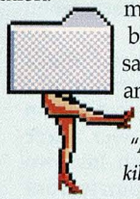




5 StuffIt Deluxe

Effectively double your hard disk space with this affordable disc compression utility. StuffIt Deluxe also protects your discs from nasty viral infections! *"Flawless performance"* Mac Times

6 Type Twister

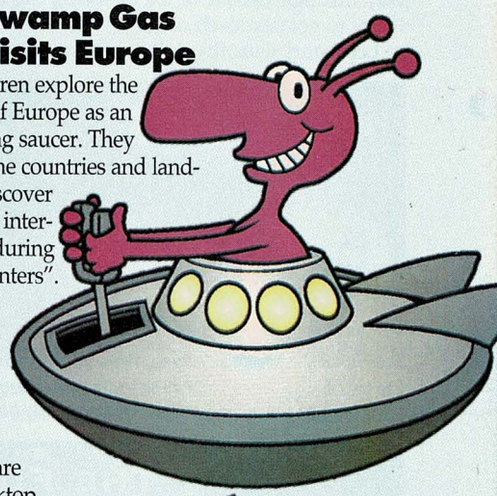
A stunning collection of special effects, fancy fonts, dashing styles and vibrant colours to help get your point across. Type Twister works with all word processing and DTP software.

7 Thinkin' Things

This award winning program provides six thought provoking activities designed to build problem solving, critical thinking and memory skills for 4 to 8 year-olds.

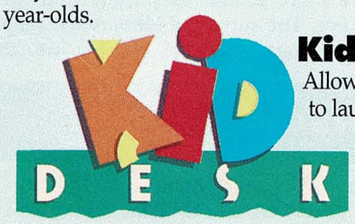
8 Swamp Gas visits Europe

Lets children explore the geography of Europe as an alien in a flying saucer. They visit all the countries and landmarks and discover hundreds of interesting facts during "close encounters".



9 Bailey's Book House

Fun filled activities designed to help your children learn about letter names and sounds, rhyming words, how words affect meaning and much, much more. Ideal for 2 to 6 year olds.



11 KidDesk

Allows children to launch their own software from KidDesk's desktop, making it fun for them to explore and learn. KidDesk blocks access to your valuable data and files, so their enjoyment won't be marred by your rage!

12 Spectre Supreme

Compelling 3D simulations pose ever more hazardous challenges. With up to 13 players over a network, Spectre Supreme is totally addictive!

"Totally addictive. Brilliant. Worth every penny" MacUser

10 Millie's Math House

This award winning program helps children learn mathematical concepts while exploring the house. They meet the colourful characters and demonstrate their understanding by answering the questions. Ideal for 2 to 6 year olds.

Now available from your nearest dealer.

These products are available from all major Apple dealers and mail order catalogues. For more information, call 081 241 8925.

IONA Software LIMITED

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Play the game! There's a demo of the furious fursome on this month's CD-ROM

Fury of the Furries

They're small, fluffy and kind of cute, but watch out for the fireballs. Jonathan Davies scrolls through Furry land and is pleasantly surprised.

You're entitled to view a platform game that stars small, amorphous, big eyed blobs with a certain amount of scepticism. There is, after all, nothing simpler than drawing a circle on a piece of graph paper, sticking some cartoon-style eyes on it and considering the job done. There are no awkward walking animations to worry about, and no fiddly clothes to design, and you're certain of duping most of your audience into pointing at your creation and saying, 'Ah, look, isn't that sweet?' Pah. 'Go away and come back when you've learnt to draw,' more like.

But the Furries, or Tinies as they're referred to in the manual – maybe because this is a sequel(ish) to *The Tinies*, which we reviewed in MACFORMAT 2 – completely won me over. There are four different Furries, each with his own different skills, and you've got to puzzle your way through each level by choosing the correct Furry to get past each obstacle.

Let's start with the dullest: the red Furry. He can eat through bricks in certain places, which is, you must admit, pretty dull. Then there's the blue one. He can swim underwater and blow bubbles, which isn't terribly interesting either. And then it all gets a little more interesting: the yellow one can throw fireballs at baddies. The longer you hold down the **[space-bar]** the more powerful his throw. He assumes a tense ninja posture as he charges and unleashes his fireball with a high-pitched 'Yee-har!'

MACFORMAT Classic

But by far the best is the green Furry. When you press **[space-bar]** he attaches a rope to the ceiling above him, and can then either climb up it or sway from side to side. With a bit of practice you can get him to swing through the air Spider-Man-style, which is immensely entertaining. He can even latch on to moving platforms and baddies flying overhead, and he didn't even bat an eyelid when I accidentally got him caught on a ceiling fan.

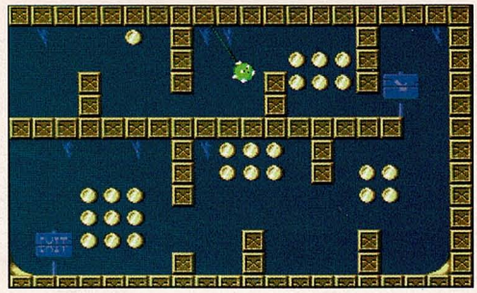
The plot is completely incomprehensible, but you've basically got 90 levels to get through (plus loads of secret bonus rooms and the like). These levels are divided into nine themed zones. The first zone, the desert, is incredibly easy, enabling you to work out what each Furry does and get to grips with the subtleties of the controls.

But after that they rapidly get tougher, with some excellent level design. There are lots of terribly clever bits that involve water flowing from one place to another, for example. Blocks can be pushed about to quite fiendish effect, and there's more to the teleporters than first meets the eye. The supply of ideas never seems to dry up no matter how far you get into the game, so there's no danger of it getting repetitive and you being bored.

Although you get a limited number of lives, which seems a bit harsh in a game that relies largely on trial and error, there's an automatic save-game facility that operates twice on each zone – once at the beginning and once halfway through. So it's challenging without being tedious, as you don't have to go right back and start from scratch if you mess up.

Fury of the Furries surprised me greatly. It's fast-paced, attractive-looking and cleverly designed, and it, sort of, erm, feels nice to play. It's probably got a lot to do with the green Furry, who's definitely my favourite game character of the year. *Jonathan Davies*

See the world, play *Fury of the Furries*. Pack your bags and travel through nine different zones with the cuddly gang.



Gasp as he shins up the rope. *Admire* his Spider-Man-style swinging technique. *Envy* his cool in the face of ceiling fans.

Oh, no. The yellow Furry unleashes a belching fireball at his fiendish foe. Or maybe it's just indigestion.

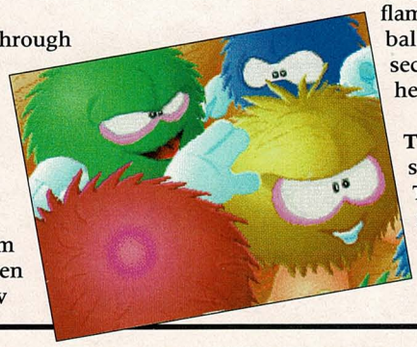
THE FURRY FOURSOME

There's actually only supposed to be one Furry, who can switch between four different modes. But it's nicer to think that there're four different ones.

The red Furry chomps through crumbly sections of walls and floors. Definitely the least engaging. He really ought to learn to juggle or tell jokes or something.

The blue Furry can swim underwater, which is often useful, and can also blow bubbles at sharks and other marine life to kill them. (Don't try this at home, kids.)

The yellow Furry can walk through flames, and also launch fireballs at baddies and weak sections of the scenery. And he makes some great noises.



The green Furry can swing on a rope, like Tarzan or Spider-Man. He really deserves a game of his own, and possibly a light entertainment programme on BBC2.

FURY OF THE FURRIES

Price: £34.99. Out: now.
Requires: LC or better, System 7.0 or later, 4Mb of RAM, 256-colour, 12-inch monitor and 5Mb of free hard disk space.
For more details contact Mindscape on 0444 246333.

Graphics 76%
Tiny characters, but the animation is great.

Sound 85%
Cute, high-pitched voices and tolerable music. Yellow Furry makes some good noises.

Gameplay 91%
First class. You'll need all your wits about you, and a formidable command of the cursor keys.

MACFORMAT RATING 90%

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Gamebusters

Lost in *Myst*? We lead you out in a sanity-saving three-part solution. Plus a reader uses the Force, and Derek's anguish continues...

Ah, *Myst* – a gorgeous game, full of luscious images, but it can drive you stark raving *bonkers* when you try to play it. Never mind, help is at hand from Gareth Maddocks of Bishop Auckland. Thanks, Gareth – you'll be getting a copy of *Rebel Assault* in the post shortly.

Myst

In the Myst Island level, the note lying on the grass leads to the room under the docks. Enter '8' into the machine (this is the number of marker switches on the island). You'll get a recorded message – your brief for the game.

Now head to the library – the books contain invaluable information, so read them and make notes on what you find. The painting on the left-hand side opens the door to the tower, where you'll find some more hints. The painting on the right-hand side shuts it again. The point of the adventure is to collect all the pages of either the red or the blue book. You must put these pages together. At first you'll get a fragmented message, but don't worry, it becomes clearer the more pages you collect.

To get to the Mechanical Age you have to use the wheels to set the clock tower to 2.40, and then you've got to hit the button to raise a path to the tower. Once you're inside, pull the levers to set the numbers to 2, 2, 1. Pull the left lever to rotate the bottom two numbers one notch – hold it down to continue rotating the middle one. The right lever does the same for the top two and the other one resets the puzzle. Now, head to the giant cog. It will have opened, revealing a book that will zoom you to the Mechanical Age.

Go into the fortress and explore the two brothers' rooms. Each has a hidden chamber containing one of the book's pages. Achenar's chamber also has a fortress rotation simulator in it. Put in some practice on this – you'll need all the practice you can get for when you have to rotate the real thing. Each direction has its own sound so you'll be able to tell which way you're facing – once you've worked out which sounds are which, of course.

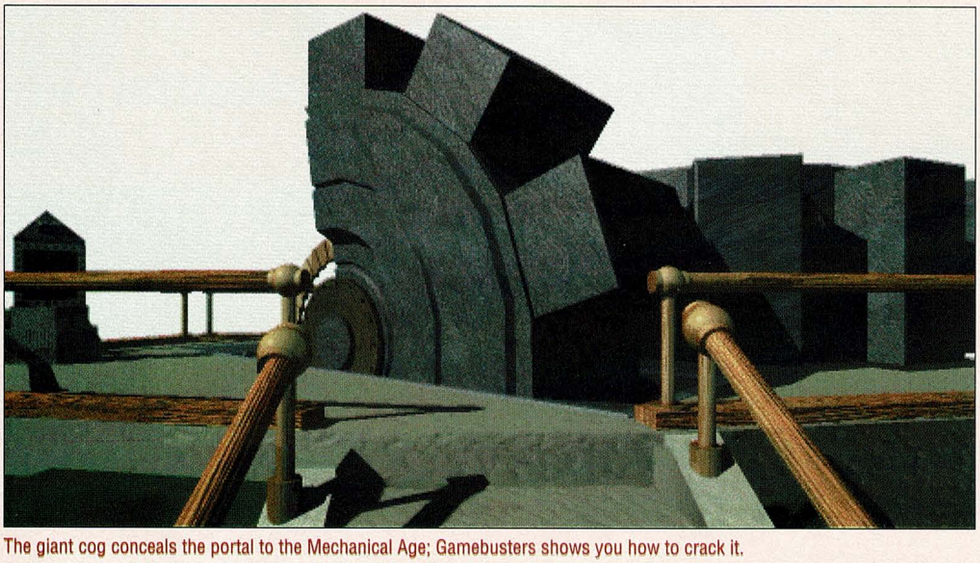
The real rotation device is found between the two rooms. Press the red button to open a panel in the floor and go down the stairs. Use the lever to line up the two circles and go back upstairs. Press the button again and get into the lift. Press the up arrow, and when you reach the top press the middle button and step out while it's beeping. The lift will go halfway down, enabling you to reach the controls.

Rotate the fortress until it's facing north. Call the lift and go outside. Copy the two symbols you see and return to the controls. Turn the fortress to the east island and copy these symbols. Use the controls to go back to the south island and enter the symbols into the machine. A door opens, revealing a book that returns you to Myst Island. Remember to take a page.

Next month, learn to navigate your way around the Selenetic Age in a yellow submarine.

You'll have to rotate the entire fortress to find the symbols that will take you back to Myst Island...

...but here's some we made earlier. Enter these into the device to get back.



The giant cog conceals the portal to the Mechanical Age; Gamebusters shows you how to crack it.

Derek Aid

Derek continues to drive us all mad. He just cannot get to the end of *Sensory Overload*. We need you to put us out of his misery. You have no idea what it's like trying to write with those howls of frustration in the background. If you have tips on this or another top Mac game, send them to: Gamebusters, MACFORMAT, 30 Monmouth Street, Bath BA1 2BW – and you could win five pounds. If you have a complete solution like Gareth's *Myst* tour, you could even win a new game for your collection.

Rebel Assault

Neil Simpson from Hawick has progressed further into this game (which was awarded the MACFORMAT Classic award in issue 18) than anyone else who's written in. Here are his level codes for 5 to 14:

5. RALRRA
6. FRIJA
7. LAFRA
8. DERLIN
9. MOLTOK
10. MORAG
11. TANTISS
12. OSWAFL
13. KLAATY
14. IRENEZ

If you can beat Neil and get beyond this point, send in the extra level codes and you could win that crisp, not-at-all dog-eared Lady Godiva (that's a fiver to you, mate). *Richard Hill*

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Sounds neat and tidy...

Are your synthesiser's sounds scattered all over the place? Get a librarian for your Mac and they instantly become easy to file and edit. Ian Waugh sounds out several and gets sorted...

Programmable synthesisers can produce thousands of different sounds. And whether you create them yourself or buy third-party sound files, the chances are your collection will be scattered over several disks. Even if they're neatly labelled, you probably won't be able to recall what each sound is like. Or maybe you know you have a certain sound, but you can't find it.

To keep your sounds organised, use a librarian. This is a program that will catalogue, analyse, group, sort and arrange your sounds so the ones you want are easy to locate.

The librarian stores the parameters used to create the voice and transmits them to an instrument via MIDI. This means that a single program can store all your sounds, so you're no longer restricted to the capacity of a floppy disk.

The Mac is not blessed with a large number of librarians but those which are available are powerful beasties. All support not just one instrument but several dozen and hence earn the title Universal Librarian.

Some also include edit facilities. It's usually far easier to edit a synth using the graphic-based interface of the Mac than it is using the tiny little LCD and nested menus which most digital synths have today. Of course, edit facilities are only of any use if you actively want to edit. The vast majority of synth owners, it has been shown, are quite happy using pre-sets and third-party sounds.

It can't be easy designing one program that can support several different synths. How does it cope with the individual features each instrument has? The answer lies in synth profiles, modules or drivers that you load into the main program. These provide features specially designed for each instrument. Some developers supply free profiles, others charge.

Before buying an editor or librarian it's vital to assess your future needs. If you plan to add more instruments to your set-up, you need a program that's actively supported by the developer – and one whose profiles don't cost an arm and a leg. If you're a pre-set person then voice edit facilities won't be essential.

Jargon Busters

OMS: Opcode MIDI System. A sort of superior version of Apple's MIDI Manager. Essentially an environment in which multiple MIDI applications are kept updated about your MIDI setup. Once you've entered information about your system into OMS, all OMS applications will have access to that data.

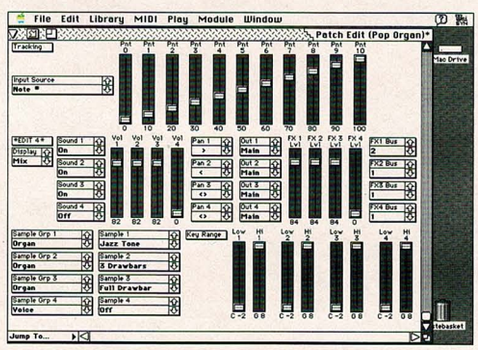
Master keyboard: a single keyboard that's used to play and control several synth modules.

SysEx data: System Exclusive data – MIDI data which is exclusive to a particular instrument. It is most commonly used to communicate the parameters which make up voices.

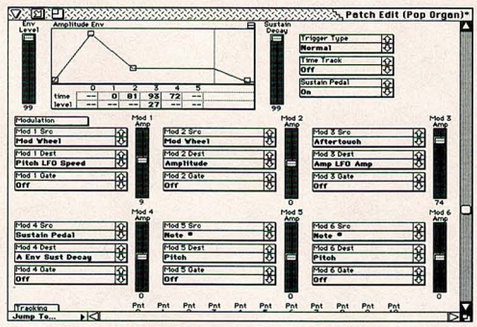
Unisyn

Unisyn is a universal librarian and editor. If you use Mark of the Unicorn's *Performer* sequencer, the user-interface will be familiar. And if you're a *Performer* fan (and owner), it's worth getting *Unisyn* too – it'll cost just £159. If not, you can buy both together for £449, saving £150.

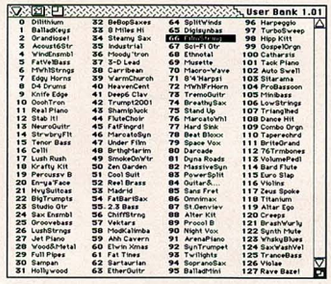
The latest version of *Unisyn* includes colour support and has over 170 instrument profiles. One of the latest sets was sent to registered users free of charge. Another that supports many recent instruments such as the Alesis QuadraSynth, Emu's Vintage Keys Plus, Korg's 05R/W and X3 and Yamaha's TG500, will bear a fee of around £35. It's MotU's policy to create new profiles as new instruments are released.



Mark of the Unicorn's *Unisyn* has a similar interface to *Performer*. Most functions can be altered with a slider with values confirmed by a numeric readout.



Envelopes can be edited graphically in Mark of the Unicorn's *Unisyn* and associated parameters can be adjusted with up/down arrows and sliders.



The librarian side of *Unisyn* arranges sounds in banks so that it's easy to select sounds and transmit them to your synthesiser.

Unisyn also includes MotU's FreeMIDI system. This allows any FreeMIDI application full access to any *Unisyn* banks and real-time operation of *Unisyn* with a sequencer. It'll even configure your Mac to your MIDI equipment.

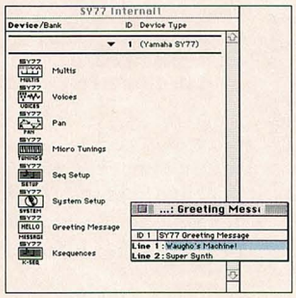
- **Price: £245.**
- **Requires: 4Mb RAM, System 7.0.**
- **For more details contact Klemm Music Technology on 0462 733310.**

Galaxy Plus Editors

Opcode's major sequencer is *Vision* and when you buy it you get the *Galaxy Librarian* thrown in. Sadly, *Galaxy* doesn't appear to be available separately. A most peculiar marketing ploy...

If you don't have *Vision* then you have to buy *Galaxy Plus Editors* – a shame if you only want a librarian. But the program is extremely powerful and comprehensive, particularly when used with *Vision*. The two integrate superbly. When they're used together, you can select sounds from within *Vision*.

Emagic has plans to add support for Opcode's OMS (Opcode MIDI System) to the company's *Logic* sequencer. This will also support



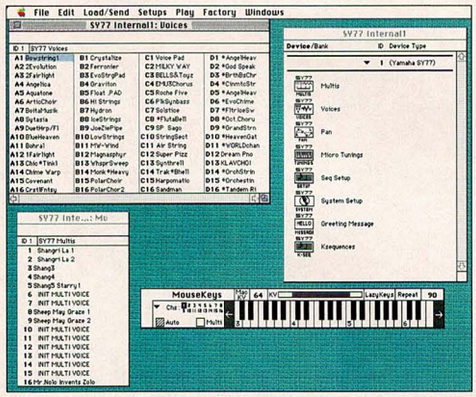
The Yamaha SY77 librarian in *Galaxy* gives you direct access to many functions including the Greeting Message.

Galaxy and enable you to select your patch names from within *Logic*. Other music developers are also looking at OMS support, so we may reach a stage in a year or so when all MIDI programs are compatible with each other.

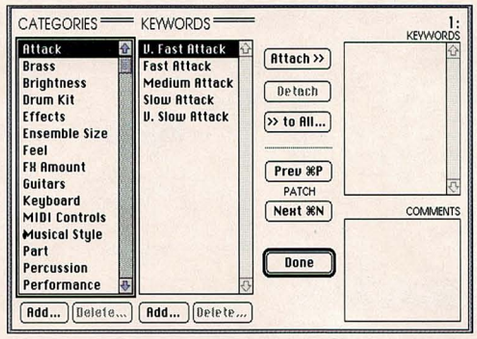
Galaxy is a very sophisticated program but it's also one of the most involved to install, set up and, at times, to use. Reading the manual is absolutely essential if you want to work your way through modules, bundles, banks and parent and child patches.

Galaxy currently supports over 100 modules. Contact the distributor to discover if there are modules for the latest instruments. The adventurous can create their own modules using a scripting language called PatchTalk, but you must have some knowledge of the MIDI spec, hexadecimal notation, SysEx data and a few principles of programming under your belt.

Galaxy Plus Editors is a very powerful system.



Galaxy's sophisticated librarian facilities can show banks of instruments and Multis – groups of sounds arranged for multitimbral use with a sequencer.



In *Galaxy*, you can attach keywords to sounds to help categorise and identify them. You can even attach up to 60 pages of text to a patch!

If you already have *Vision* and want to add editing to the librarian functions of *Galaxy*, it's got to be the obvious choice. Give yourself a little time to get to know it and nurture that knowledge, and you'll be well rewarded by the uses you find for it.

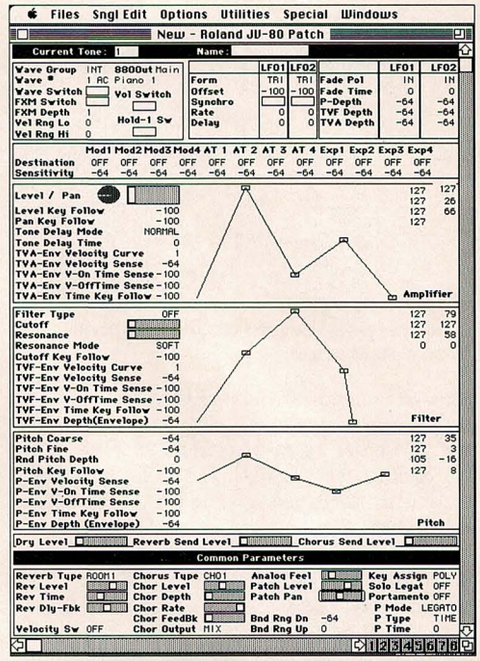
- **Price: £349.95 (£449 with *Performer*)**
- **Requires: Mac Plus, System 6.0.7 or later**
- **For more details contact MCMXCIX on 081 963 0663**

MIDI Quest

Quest is a universal editor and librarian with support for over 190 devices. The nice thing about it is that all drivers are free, making the package doubly attractive. But it's best to check with the distributor to see how often updates appear and if the latest synths are supported.

The program uses different windows for different functions – which is how one program manages to handle so many different instruments. It adopts a graphic approach for the envelopes, along with knobs and sliders for other parameters. The user interface is perhaps not as intuitive as it might be, but then few programs of this kind are as yet. A few hours immersed in the manual should point you safely along the right track.

The librarian uses keywords to enable you to select sounds of a certain style and it can track down duplicate voices. When inspiration's lacking, randomisation techniques will produce new sounds – some of which you may be pleasantly surprised to find are usable.



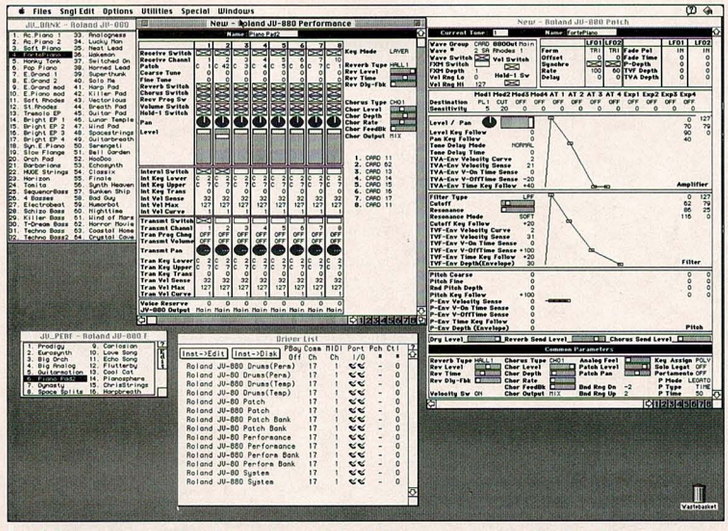
Quest has graphic envelope generators and slider and rotary controls with numeric confirmation of the parameters. You might need to consult the manual for full comprehension.

If you're a one-synth guy or gal then check out *Solo Quest*. It comes with all the drivers but you can only install one of them – decisions, decisions. If you change your mind later on, or just want more, there is an upgrade path to the full *MIDI Quest*. Incidentally, *MIDI Quest* is also available in *Windows* format for the PC, although for some reason that costs an extra £16.

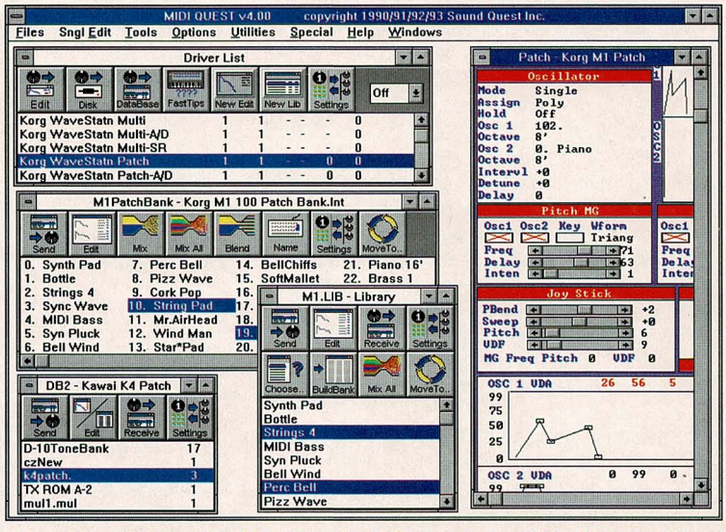
- **Price: £219.**
- **Requires: any Mac.**
- **For more details contact Arbiter Pro MIDI on 081 202 1199.**

SoundSurfer

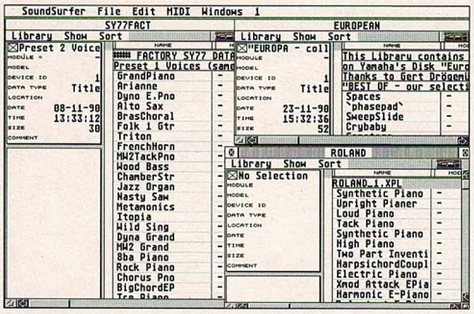
SoundSurfer is a universal librarian, or MIDI data bank as it calls itself. It uses modules to



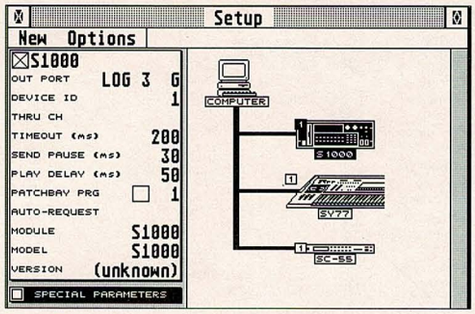
MIDI Quest has separate windows for each function so you can use either the librarian functions on their own or call up the edit windows, too.


MIDI QUEST v4.00 copyright 1990/91/92/93 Sound Quest Inc.
Files Sngl Edit Tools Options Utilities Special Help Windows
Driver List
M1PatchBank - Korg M1 100 Patch Bank.Int
M1.LIB - Library
DB2 - Kawai K4 Patch
Patch - Korg M1 Patch
Oscillator
Pitch MG
Joy Stick

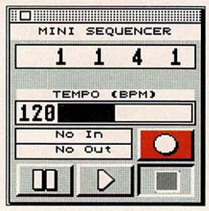
Yes, we know this is from the *Windows* version of *Quest* but we thought we'd give you the chance to see how nice it looks in colour. Nice to know you get *something* for the extra £16...



SoundSurfer can handle banks of sounds from several devices at the same time.



SoundSurfer adopts a highly graphic approach when it comes to linking devices to your computer.



SoundSurfer includes a Mini Sequencer to enable you to test your collection of sounds by playing MIDI files at them.

manage individual instruments but you can also create 'adaptations' using a universal module. These are easier and faster to create than the modules themselves, and there's a further benefit in that you can control devices for which there are no modules.

The central concept of the program is to allow you to manage your sounds on screen without having to make any changes to the equipment itself. You can sit back and let the librarian run on autopilot and it will make the changes for you.

It collects the sounds from different instruments together so if you want to look for bass sounds, for example, it will show you bass sounds for all instruments – guitars, drums, you name it. Click on one and it will send it to the correct synthesiser and ensure that your master keyboard will play it. Very handy indeed.

One interesting aspect of *SoundSurfer* is that many of the modules go much further than you might expect. The Yamaha SY77 module, for example, can convert DX7 sounds and the Waldorf Microwave module can manage wave tables with no problem at all.

At the time of writing, the version of *SoundSurfer* for the Macintosh was not available but it is due imminently. You will notice that the illustrations are from the Atari version. The reason it looks very Macintosh-like is because of the font. Interestingly, *SoundSurfer* files are compatible with both computers. So if you have one of each you can exchange programs between them.

Program operation has many similarities with Emagic's *Logic* sequencer and a *Logic* user will feel at home here. Many of the operations are graphic but you need to read the manual if you're going to get the best out of the program.

- Price: £139
- Requires: Mac Plus, System 6.0.4 but 7.0 recommended, 4Mb RAM
- For more details contact Sound Technology on 0462 480000

SoundDiver

Emagic's *SoundDiver* was demonstrated at the 1994 Frankfurt Music Messe. It's a combination of the *SoundSurfer* librarian with sound edit facilities. It's altogether a very accomplished and powerful program.

At the time of writing *SoundDiver* has yet to make an appearance on any type of computer. However, the distributors say that a release date is not far off and hope it will be available by the time you read this.

- Price: £299
- For more details contact Sound Technology on 0462 480000.

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Whether you're buying by mail or in person, here are some sensible precautions to bear in mind. Note that everything here applies to buying from a business; most of it does *not* apply to buying from a private seller in MACFORMAT's reader ads pages.

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2. 'as described' (in the advert or in person – and this one criterion also applies when you're buying from a private seller, not a business);
3. fit for the purpose for which it was sold or for the purpose you specified when you ordered it.

If it fails to meet any or all of these criteria, then you are entitled to return the goods for a refund, receive compensation for all or part of the value, or get a replacement or free repair, depending on the seriousness of the defect. These are the 'statutory rights' that adverts always say are 'not affected' by any extra guarantees. The supplier cannot change or deny these rights.

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- Citizen's Advice Bureau;
- Trading Standards Office (listed under your local council);
- Office of Fair Trading; or
- County Court (ask for information about the 'small claims procedure').

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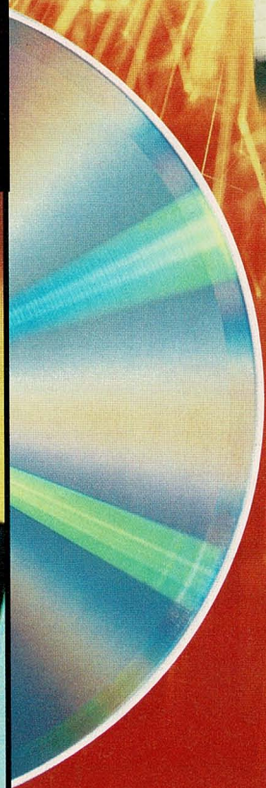

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■ Macintosh Portable, carry case, two batteries, manuals, power adaptor, recently serviced, new backlight, cable, upgraded floppy drive – £400. Contact Aaron after 6.00pm on 0376 320426.

■ PowerMac 7100/66 8/250 CD, 4 months old £1,850. Also PowerMac 7100/66 8/500 CD AV – £2,400. Both mint. Radius 19-inch greyscale with card – £250. Contact Alex on 0789 415465.

■ Performa 14-inch colour monitor, hardly used. ImageWriter II, light home use. Both with cables and manuals. £250 or swap for 8Mb 72-pin SIMM. 0734 714059 evenings only.

■ NEC 4 x Pro CD-ROM drive, quad speed, 6 months old – £500 ono. Contact Tony on 0203 501849 (eves) Coventry.

■ Centris 650, 16Mb of RAM, 500 H/Disk, ext keyboard, mouse, 14-inch high resolution colour monitor. Lots of software plus extras – £1,750. Tel: 051 495 2350.

■ Mac SE30 8/60Mb with carrying case and screen protector, System 7 – £400. Or with DeskWriter and software. £600 ono. Tel: 0582 34111 ext 2519 (days).

■ Caere Typist hand held scanner with OCR – £200 ono. Datastream tape streamer with *DiskFit* backup software and ten 40Mb tapes, recently serviced – £250 ono. 081 675 7280.

■ Mac SE30 4/40 with colour card and 14-inch colour monitor, with extended keyboard and System 7 including all manuals, excellent condition, home use only. – £550 ono. Contact Richard on 0489 575262.

■ ImageWriter II printer, excellent condition, home use only – £100 ono. Contact Richard on 0489 575262.

■ PowerBook 160, StyleWriter, both under warranty, 14-inch colour monitor (new), carry case, mouse and lots of software – £1,000 ono the lot. Tel: 0268 490560 (evenings).

■ PowerBook 145B 4/80 as new, complete with adaptor, box and manuals – £695. Tel: 0247 465870 eves & weekends.

■ Colour Classic 4/80, System 7.1, *RAMDoubler 1.01*, fully boxed, in excellent condition – £550. Tel: 081 673 5408.

■ AGFA ARCUS 1200dpi scanner with transparency unit – £1,800. Fargo Primera colour dye-sub printer – £500. Both less than one year old. Perfect condition. Tel: 0484 647186.

■ LCIII 4/40, Maths Co-pro, CPU only. Boxed as new – £350 ono. 8Mb, 72-Pin, 70ns SIMM – £200 ono. Spectrum SuperMac video board (1993) – £200 ono. Interested? Contact Ewen on 061 480 5470 (evenings).

■ GCC SelectPress 600 Pro A4/A3 600dpi laser. 16Mb of RAM, 160Mb Hard disk, Ethernet, unused and boxed. Unwanted prize. Offers around £3,000 please. Tel: 021 711 4878.

■ Classic II 4/40, *ClarisWorks* and StyleWriter, all original disks and manuals included – £500 ono. Tel: 0642 814237.

■ Newton 100 upgraded to 110 functionality, 1 Mb card, *ExpensePlus*, *GoFigure*, mains adaptor, books etc. As new under warranty – £300 ono. Contact Nick on 071 267 8590 (evenings).

■ Performa 400 4/40 and StyleWriter II printer. 6 months old, bought for £1,000, will sell for £500 ono. Contact Simon on 0842 752819 (after 7pm).

■ Mac Classic II, 4/40 boxed with manuals. Also StyleWriter II Inkjet printer again with manuals, etc. Telephone: (Westbury) 0373 858475 anytime.

■ Mac SE/30 with 8Mb of RAM, 24-bit video card, System 7, keyboard and mouse. Image II Printer, home use only, very good condition – £450. Contact D Mann on 071 931 6541 (day) or 0483 724 294 (evenings).

■ Apple Newton, plus adaptor, tutorial card, video, Mac connection kit 1.0. Both boxed, unused and unregistered – £400. Offers? Tel: 081 534 0917 (eves).

■ Hewlett Packard DeskWriter 550C with spare black and colour cartridges, three disks (50 fonts), three months old, hardly used – £300 ono. Interested? Contact James on 0667 453992.

■ LC 4/160, 512K VRAM, CPU and mouse only. System 7, includes *Symantec*, *GreatWorks* and shareware, light home use – £350. Tel: 0371 874196 (evenings).

■ Accelerator for Colour Classic, 32MHz, Cache. Only £120. 2Mb SIMMs for above, LC, LCII, ClassicII – £80. Contact Kevin on 0405 815415.

■ External 800k FDD for Macintosh PNO – £30. 4x1Mb 64 pin SIMMs for Mac IIfx or laser printer – £50. *Journeyman Project CD-ROM*, unopened – £20. *Pagemaker 5* upgrade – £70. Tel: 0480 300409.

■ VideoSpigot for Mac IIsi with *Premiere*. Unused, boxed, cheap. Tel: 081 444 4637.

■ ImageWriter II, very good condition, boxed with cables and manual. Home use only – £150 ono. Tel: (Downham Market) 0366 6434 evenings.

■ Macintosh PowerBook 100, 4/40, external superdrive, very good condition, includes all disks, manuals, carrycase – £450 ono. Tel: 0483 454550.

■ LCII 4/40. 12-inch colour monitor, StyleWriter comstation II, fax/modem, manuals, cables and covers – £550. Tel: 0287 637366.

■ Performa 200 4/210 – £425. Personal LaserWriter IISC – £325. B/W hand scanner – £60. £700 the lot or swap any colour Mac. PowerCD and speakers – £120. Tel: 071 272 6878.

■ Mac SE 4Mb of RAM, 20Mb disk, 800k floppy, keyboard and mouse (works but screen is broken) – £125 or will split. Tel: 0784 481002.

■ Classic II 4/40, System 7, keyboard, mouse, manuals, ImageWriter – £550. Call Mendelsohn on 0508 492533.

■ Classic II 4/40 and StyleWriter printer with manuals and loads of software – £700. Contact Jason on 0491 875684.

■ Mac IIcx 5/80, brand new hard drive, 12-inch mono monitor, keyboard, mouse, manuals, etc. Home use only. £700 ono. Tel: 0932 858110.

■ External SCSI drives. Cobra 215e 200Mb (formatted) – £250. Micropolis 320Mb (formatted) – £350. Contact Bob on 0768 881698.

■ Mac IIfx 16/330, Ethernet, video board. SuperMac 24 Bits, 1.4Mb Apple disk drive, 21-inch Apple colour monitor, CD-ROM drive, NEC scanner B and W – £2,300 the lot. Tel: 081 813 5395.

■ Portable 1/40 (faulty hard disk), non backlight, carry case, manuals, System 6.07 – £125. Call Marcus on 0202 748 981.

■ Hitachi 16-inch high resolution colour monitor, 800 x 600 at 75Hz, 1024 x 768 at 60Hz, Apple cable included – £245. Tel: 0734 816373.

■ Quadra 950, 241230 – £1,750. Centris 610 812301 CD – £695. Duo 230 12/120 plus Dock – £850, Radius 21-inch greyscale – £495. PowerBook 170 8/120 – £550. Contact Mark on 0473 230202

■ Mac LCII with keyboard, mouse and 256-grey monitor including *ClarisWorks*. Also ImageWriter II printer and cable – £800 ono. Will separate. Tel: 0384 291275.

■ Mac SE20, expanded to 2.5Mb. Light home use only. Boxed with manuals and dust cover. Mint condition – £350. Tel: (Bournemouth) 0202 304491.

■ Performa 400 4/40, 14-inch colour

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USER GROUPS

Need hands-on help with a Mac problem? Want to swap shareware or freeware, or just meet other Mac enthusiasts? Try a user group near you...

■ Artists Bulletin Board now on-line 081 778 6547. We specialise in obscure software and magazines. It's all free. Modem speeds 2400 – 9600, 24 hours. (MF24)

■ Blackburn Mac UG. Tel: Roger Moreton on 0254 670043. (MF 26)

■ Bristol (BAUD). Tel: Malcolm Ingsley on 0454 616846. (MF 22)

■ Calling all Macintosh User Groups, Programmers and Mac Users. MacShare UK is now in the planning stages to start the UK's first support group for Mac User Groups and Shareware Programmers. However, we need your input. If you can think of any services your User Group could need or would like help with setting up, or if you are a programmer who is having problems with distribution etc, then please write to: MacShare UK, Lane End, Oak Tree Lane, Tavistock, Devon PL19 9DA.(MF26)

■ Cambridge Apple UG. Tel: Ian Archibald on 0223 311157. (MF 22)

■ Glasgow Mac UG. Tel: Stephen Broadfoot on 041 339 6646.

■ Liverpool Apple UG. Bulletin Board: 051 949 0307

■ London Mac User Group. Facilities include: telephone support for full members, shareware at reduced prices, monthly magazine and monthly meetings in London presented by leading hardware and software manufacturers. For full details write to: PO Box 3550, London, SE4 1RT. Tel: 081 690 2904. (MF 22)

■ Mac user group (nationwide) All levels. Non-commercial. Newsletter, shareware, etc. Send large SAE for sample newsletter to Ref MF, 9 Burrill Drive, Wiggington, York YO3 3ST. (MF 23)

■ Mac User group, covers all aspects of Mac Scene Free membership and monthly newsletter. For details write to Sonic, 11 Charnock House, Lancaster Court, Chorley, Lancs, PR7 1PB. Or by e-Mail on Cosmos BBS 'Dave Andrews' (I'm the programming Forum Moderator) or on Portland BBS 'Dave L Andrews, or on the Internet: sonic@cosmos-uk.org. Don't forget you pay nothing! (MF 25)

■ MacAssist, Cardiff and district. Tel: Nigel Arrighi on 0222 224682 (MF 22)

■ MacBel UG vzw: Belgium's only non-profit Mac-User Group. We provide bi-monthly magazines, internet-access, local BBS-support (TeleFinder 32-3-4543069) and meetings. Call Bart at 32-3-6404031 or e-Mail liemb@innet.be (MF26).

■ MidApple – Apple 2 and Mac User Group meets monthly in West Midlands. Please send SAE to MidApple, 24 High Street, Wall Heath, Kingswinford, DY6 0HB for details. (MF 23)

■ New Mac User Group just starting up. We urgently need Mac-related literature, shareware, PD and new members. Free membership to MACFORMAT readers. Can you donate a BBS program so that we can go on-line? Members asked for small monthly contribution to cover cost of BBS lines and newsletters (we're non-profit-making). Interested? Write to The Network, 11 Charnock House, Lancaster Court, Chorley, Lancs PR7 1PB. Or tel/fax Dave on 0257 265025 (BBS numbers will be posted to all applicants once software is obtained. (MF24)

■ North West Macintosh and Apple User Group – Cheshire area, North. Contact Mr George Evans on 0270 583714. (MF26)

■ Nottingham Computer Club. Please send an SAE to Sherwood Community Centre, Mansfield Road, Nottingham.

■ Poole Mac User Group. Tel: Bob Lister on 0202 684441.(MF26)

■ SE Essex Mac User Group. Contact Michael Foy on 0702 468062. (MF26)

■ Southern Mac UG, Salisbury and district. Contact Roger Ford on 0722 780102. (MF26)

■ Southwest Mac User Group, Bristol. Tel: John Elver on 0272 693119. (MF26)

■ Staffordshire Polytechnic Mac User Group, Staffordshire. Contact Mark Stiles on 0785 52331. (MF 22)

■ Sussex User Group, Hastings, East Sussex. Contact Garry Nevin on 0424 714110. (MF26)

■ Telematic & Multimedia User Group. We are currently looking for new members, please contact Benjamin Stanley on 021 420 1482.

■ The Computer Textile Design Group. The essential link between computer and textile designer. Contact Dee Chester, 12 Le Brun Road, Eastbourne BN21 2HZ. Tel: 0323 725781.(MF24)

■ The Finnish Mac User Group (fiMUG) runs AppleGarden aFirstClass BBS at tel. +358 0 694 Membership FIM 150pa. Ca.800 members (Sep/94). Send a SAE to fiMUG, PL 122, FIN-00181 Helsinki, Finland for more information (MF26)

■ West Midlands User Group. Tel: Danny Torbica on 0902 336172. (MF 22)

■ Yorks and Humberside Mac UG. Tel: Derek House on 0423 358853. (MF 22)

Your user group will be listed here free of charge for six issues, then deleted in order to help weed out defunct groups. The number at the end of each entry is the last issue in which that entry will be included. If you want your group's entry renewed (or corrected), just send in the coupon on page 122 (opposite) a couple of issues in advance. If you run a group which isn't listed here, please send us your details!

Please note: this list is provided as a free service for amateur, non-profit-making Macintosh user groups. MACFORMAT does not endorse or recommend any particular group and cannot be held responsible for any losses or problems you might suffer as a result of contacting user groups advertised here.

monitor, one year old, light home use. Software including *ClarisWorks*, *SimCity 2000*, *Monkey Island II* and a full 40 Mb of assorted shareware – £700. Contact Malcolm on 0202 769958.

■ LCIII 8/270 F.P.U, Apple high resolution 14-inch monitor, boxed and under warranty, plus software. Ideal DTP/Graphics set up. £1,095. Tel: 0272 272638. Could deliver by arrangement.

■ Shiva Netmodem and NetSerial, as new but no PSU. Any reasonable offer for quick sale, or swap both for colour monitor. Call Doug on 0628 812541.

■ Roland Desktop synth SC-7 with sequencer (see MACFORMAT 16), software: *Ballade*, *Top Sounds*, library, manuals, ideal for MIDI starters – £200. Contact Arnim on 0484 866091.

■ Mac Plus 4/20, System 7.1, manuals, loads of software. I'll even show you the ropes. Bargain at £450 ono. Contact Peter on 0872 560308.

■ Macintosh Graphics Tablets. Kurta 12-inch x 12-inch, Summagraphics Mactablet 8-inch x 5-inch, both with manuals and software. Kurta – £150. Summagraphics – £50. 64 Pin FX SIMMs, 4x1 Mb – £50. Contact Richard on 0480 300 409.

■ A4 Portrait monitor Apple, black and white, four months old – £250. Contact Mark on 0223 290951.

■ Surplus kit; make an offer! WriteMoveII printer and Scanman (both boxed as new), *Thunderscan*, ImageWriter all with manuals, cables, software etc. Tel: Carol on 0234 356566.

■ Power CD three months old – £120. *Putt Putts Fun Pack* – £15. *Word Maze* – £15, *Tetris* – £10. All boxed with instructions. Tel: 0268 681982.

■ Performa 475 8/160, 1Mb VRAM, upgraded 14-inch colour monitor, keyboard, mouse, plus multimedia kit. 3 year extended warranty on site. Boxed in excellent condition. Only six weeks old. £1,650 ono. Tel: 021 356 8432.

■ Apple 40Mb SCSI tape drive, backup to 80Mb on to DC2000 tapes. Almost a collectors item! Best offer secures. Tel: 0286 870729.

■ Mac IIci 5/80, System 7, high resolution colour monitor, keyboard, mouse, plus either HP510 or Personal LaserWriter LS – £1,000. Tel: 0768 881698.

SOFTWARE FOR SALE

■ Original Bitstream fonts – £5 per disk. Phone for details: 0782 414965.

■ *RAMDoubler* – £45. *SpeedDoubler* – £10. All with original disks and manuals. Tel: Stanley on 081 458 4000.

■ *Sim Earth*, *Sim Ant*, *EarthQuest*, *Manhole*, *Cosmic Osmo*, *SoftPC Pro*, *Playroom*, *MacKids Preschool*, *Millie's Math House*, *Kid Pix*. All boxed. Swap for similar. Tel: 0344 868712 (evenings).

■ *Illustrator 5.5* (with *Acrobat* etc) and *Dimensions 2.0* – both perfect, boxed, unregistered, including standard and PowerMac versions and many fonts – £375. Tel: Brighton 0273 870560.

■ *PageMaker 4.2*, boxed with all manuals, never used – £100. *Journeyman Project CD-ROM* game – £15. Contact Richard on 081 654 7772 (daytime).

■ Microsoft *Word 5.1*, *PowerPoint 3.0 Mail*, *Excel 4.0* – £200. *Maclink+* – £50. All used, not registered. Tel: 0634 373572 or Compuserve 100414,2342.

■ *Soft PC Universal* – £45, *RAM Doubler* – £35, *PlainTalk* – £25, *Kings Quest VI* – £15, *Virex* – £10, *Lemmings* – £7. All original disks with manuals, offers invited. Tel: 0732 852034.

■ *Prince of Persia 1* and *2*, *Sim City 2000*, *Monkey Island 1* and *2*, *Populous 2* and other games – £20 each. Tel: 0232 761457.

■ *Crystal Caliburn*, unused, was £40, will sell for £25 ono. Boxed with complete instructions. Tel: Tom on 0626 333269.

■ *Syndicate*, excellent game – £20. Tel: 041 424 1778 after 6pm. Glasgow.

■ Games: *Myst CD*, *Flight Simulator 4* – £20, *Vette!*, *Eight Ball Deluxe*, *Ultima III* – £15, *Starflight*, *Mutant Beach* – £8. Tel: 0775 760356. Richard (eves).

■ *PageMaker V5*, boxed, originals – £225. *WriteNow V3* – £15. *Pyro* Screen Saver – £10. Will post. Tel: 0689 857375 or 0956 260506. Wanted: *Hellcats over the Pacific*.

■ *Now Contact* and *Now up-to-date* software – £55 o.n.o. *ClarisWorks 1* (brand new) – £45. Contact Paul on 051 259 3832.

■ Adobe *Photoshop 2.5.1*, unregistered, unopened, brand new – £200. Contact Craig 0376 550973 (evenings).

■ Low cost graphics software: *Key CAD Complete* – £25. *Turbo CAD* – £70. *Expert Draw* – £20. *Expert Colour Paint* – £20. Contact Jim on 0135 526 2845.

■ Low cost fonts: *Keyfonts* – £25. *More Keyfonts* – £25. Each includes 100 *PostScript* and *TrueType* fonts. Contact Jim on 013 552 62845.

■ Original software (registered). *Square One* – £15. *Underware* – £15. *SuperPaint Three* – £30. *Super Office* – £30. *Flight Simulator* – £20. *MacMoney* – £30. *MacRenderman/ShowPlace* – £80. Tel: 0484 510753.

■ *WordPerfect version 3*, boxed, manuals, original disks, includes several Bitstream fonts, plus *WordPerfect Hat!* – £80 ono. Tel: 081 767 4544.

■ *Aldus SuperPaint*, boxed with manuals – £35. *RAM Doubler* – £5. *Safe and Sound* – £15. All original with manuals. Tel: 041 621 0577.

■ *PageMaker 5*, in good condition – £250 o.n.o. Interested? Contact Zachary on (Jersey) 0534 880574.

■ *Scooter's Magic Castle* – £25. *Fatty Bear's Birthday Surprise* – £25. *Zoom Books* – £20. All boxed with manuals. Contact Anne on 081 244 6975.

■ *Star Trek 25th Anniversary*, requires 256 colours, 1500k memory, System 6.0.7 or better. Just completed. Cost £38.99, will sell for an astonishing £25! Tel: 0661 821904 (after 6pm).

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■ Farsi word processor with or without keyboard. Also Farsi operating system. Contact Majid on 0296 331090.

■ SIMMs 4 x 1Mb – £50. 30 pin maths co-processor, LC/LCII or Performa, £20. Tel: 0533 702675.

■ Power CD cables, two CD-ROMs (*Cities* and Power CD tutorial CD-ROMs). Install software. only £100 ovno. Contact Bob on 0342 822203 (24hrs).

■ 1Mb SIMMs four 30 pin, 80 nano sec – £25 each ono. Tel: 0543 276058.

■ *DarkSeed* or *Bill Elliot Nascar* for *Prince of Persia 1 or 2*, or *Spectre VR*. Tel: Aberdeen 0358 711291.

■ MACFORMAT magazines all 17 copies, complete with disks. Offers please. Also have numerous software packages for sale, for example *Borders Public Utilities*, *Soft PC* etc. Tel: 091 5220049 after 6pm.

■ Memory SIMMs 4 x 4Mb, 72-pin, 70ns – £50 each. 4 x 4Mb 30-pin – £40 each. 8Mb PowerBook upgrade for 160/170 etc. – £120. Tel: 0602 819225.

■ SIMMs 2 x 2Mb, once used in LCII, but I now have an LC475 – £80 ono. Tel: 0373 831293.

■ Mac cables, 5 ADB 2 port extenders (6ft). Main power cords (6.5ft) ADB/ADB Extenders. Total cost new £220. Will sell for £100. May split. Tel: South East London on 081 461 2581.

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■ MACFORMAT cover CD-ROMs, from issues 13 & 14. Willing to buy or swap against *Supersonic Interactive* CD-ROM (unopened). £50 value. Tel: (France) +33 1 4584 5597.

■ *Lemmings* and any kind of joystick at reasonable price and condition. Contact Alex on 0362 860330.

Can't pay, won't pay!

The worst enemies of shareware are the authors themselves, says MACFORMAT reader Dave Porter...

Recently a MACFORMAT reader suggested sending US dollar bills to America to pay for shareware. This may be a practical answer but it's risky. I think we are approaching this from the wrong angle.

MACFORMAT 11's cover disk included *SpeedyFinder 7*, which makes some useful improvements to the System 7 Finder. The author, Victor Tan, lives in Australia and wants US$25 cash for it. He wants me to go to the bank, buy some US dollars, pay the commission, put them in an envelope and hope that they will eventually arrive intact. Frankly, this is a bit too uncertain and too much trouble for my liking.

MACFORMAT 13's cover disk featured *Menuette*, an excellent program that replaces the menu bar text with icons. It's written by two Californians who have a credit card account with their bank and a fax machine. All I had to do was click on 'Print Order Form', type in my name, address and credit card details, print it and fax it to the number on the form. What could be simpler than that?

Most of us these days, including younger Mac users with parents, have credit cards and access to a fax machine. Credit cards are the easiest form of payment in the world, and faxes one of the fastest means of sending documents.

Shareware authors must know that fax machines, or even fax modems, are quite affordable now. And all banks can arrange credit card processing, even for a small business. Of course they charge – about 5%. But surely 95% of the fee is better than no fee at all.

My experience is that the easier you make it for someone to buy something, the more likely they are to do so. When you go into a record shop to buy Kylie Minogue's Greatest Hit(s), they take cash, cheques and major credit cards. They don't insist on Japanese Yen. Shareware authors widely distribute their programs via bulletin boards and cover disks, but then make it virtually impossible to pay for them. Not very sensible when we already have the program!

In the documentation with *SpeedyFinder 7*, Victor Tan asks for US dollars in cash and says, 'All other forms of payment including traveller's cheques, EuroCheques, MasterCard, Visa etc are not acceptable. Sorry.' I like *SpeedyFinder 7*, but shoving cash into envelopes is not on. Sorry. Make it easier for me to pay and I will.

Dave Porter
Northumberland

OVER TO YOU...

The opinions expressed on this page are those of the authors, not necessarily those of MACFORMAT or Future Publishing Ltd. If you have something to say, write to 'Soapbox', MACFORMAT, 30 Monmouth Street, Bath BA1 2BW. ASCII text on disk would be nice, but it's not essential. We reserve the right to sub-edit your grammar, but we won't alter the sense of any opinions we publish here.

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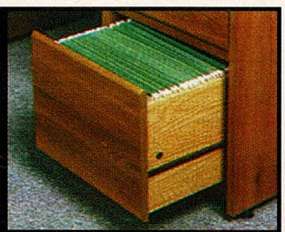

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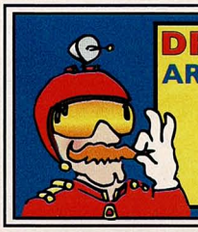

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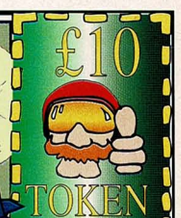

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ACWL SYSTEMS.....19
ASTECH COMPUTERS....126-128
BRIGHTON COMPUTER SUPPLIES 78
BUDGET CLIPART.....126-128
CAMARGUE COMPUTING 126-128
CANASTA.....126-128
COMPUTER CAPABILITY.....IBC
COMPUTER WAREHOUSE..12-15
DABS PRESS.....65
DECLARE 126-128
DNA COMPUTER SERVICES.....126-128
DOCS WORLD IMAGE ..126-128
EMERALD CREATIVE TECHNOLOGY.....42
FUTURE CONNECT.....68
GASTEINER.....125
GOLDEN IMAGE LTD....126-128
HARWOODS 21-24
HI-TEC COMPUTERS.....126-128
IMAGO EUROPE LTD....126-128
INFO/NETT.....86
JADON DESIGN.....126-128
LASER PRINTING CO 91
LE PIXEL.....81
LMS ENGINEERING.....126-128
LONDON DISK COMPANY.....126-128
MAC MANIA.....126-128
MAC MEDIA.....126-128
MAC POW 126-128
MAC RECRUITMENT.....126-128
MACLINE.....38-41
MACZONE.....54-55
MAPEJ 126-128
MD OFFICE SUPPLIES 78
MEGASOFT COMPUTERS LTD 126-128
MERIDIAN SOFTWARE .DISTRIBUTION 84-85
MORGAN INDUSTRIES ..126-128
MYGATE COMPUTING.....77
.NET MAGAZINE 71
R&B PARTNERSHIP 126-128
SOFTLINE DISTRIBUTION.....IFC,3
STORMONT SOFTWARE 126-128
STUDIO FISH 126-128
THE HIT SQUAD.....126-128
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TOMA DIRECT 126-128
TRINITY SYSTEMS 115

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35,068

Next month

Desktop Video

Learn how professional film-makers – and even the BBC – use Macs to edit video, and discover how easy it is to do it yourself with our bonus cover disk. Your home movies, projects or business presentations will never be the same!

Budget Games

Newly released titles for half the normal price – or even less! We tell you which ones are the bargains and which still aren't worth it...

PLUS The latest news, practical how-to's and authoritative reviews ■ The hottest shareware reviewed (and yours to try with the CD-ROM edition) ■ MACFORMAT's regular coverage of just about anything you can do with your Mac, from DTP, graphics and spreadsheets to music and comms!

ARE YOU A WINNER?

Back in MACFORMAT 16 we gave you the chance to win a desktop music set-up, and the lucky winner of a Yamaha 'Hello! Music!' package plus Miracle Piano Teaching System is Andy Wiles of York. The runner-up who wins a Yamaha 'Hello! Music!' package is Matt Overton of Birmingham.

In MACFORMAT 17 the *big* prize was a Hitachi 17MVX 17-inch monitor, and it goes to the sadly first-name-deprived MW Spenceley of Edinburgh. The ten winners of the *Zargon Zoo* competition in the same issue, courtesy of Plum Productions, are K Pillar of Portadown; Doug Wylie of Woodham, Co Durham; C Davidson of Wrexham; Kari & Kristin Griffiths of South Australia; Nick Gough of Bengeo, Herts.; GJ Sledge of Ware in Herts.; R Tomczak of Morillon, France; Paul Hardwick of Solihull; Richard Lomax of Leicester; and Derek Brandon of Carshalton, Surrey. Well done to everyone!

More small talk from the Tiny Zone...

Hello and welcome again to the Tiny Zone, the section of MACFORMAT that fits in this space. Did you get along to Apple Expo then? As Apple has been 'repositioning' the Macintosh as a home computer rather than just an office machine, the UK's big Mac show seems to be becoming more a consumer show rather than just a trade event, and this year there seemed to be even more chances to try and buy rather than just to see and hear what's new. (Or new*ish*. Most of the *big* launches nowadays seem to happen in Frankfurt or in the US, at the even bigger international shows.) This year, for the first time, they even let under-16s into Apple Expo – officially on the last day only, but all I can say is that lots of 'adults' seem to be looking younger and younger these days... Thanks to everybody who dropped around to the MACFORMAT stand to say hello, pick up a free sample CD or just try out *Rebel Assault* – it was great to meet so many of our readers! Since we've been back, though, everybody seems to be succumbing to The Curse of the MACFORMAT Office: Mark was off sick with flu, Alex has been trying to fight it off but only managing to spread his germs around, so Catherine's feeling poorly now, and Rich has had the sniffles for about a week. Emma's been confined to bed with sciatica. Dan has a bad back anyway and can often be found on the floor. Derek's OK so far but wishes he'd stayed at Apple Expo, where it was safe...

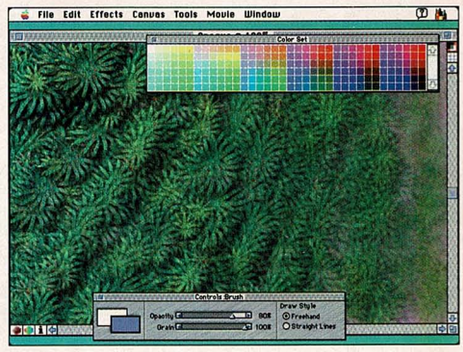
MACFORMAT 21 goes on sale on Thursday 5 January

Available with two high density floppy disks or CD-ROM. Ask your newsagent to save you a copy or see the insert in this issue for our subscription offers

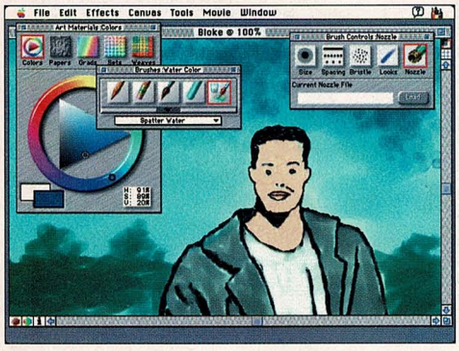
Win the new Painter 3.0

Fractal Design's *Painter 3.0* is the state of the art in 'Natural Media' paint programs. We have five copies to be won, each worth £440, courtesy of the distributor, Letraset.

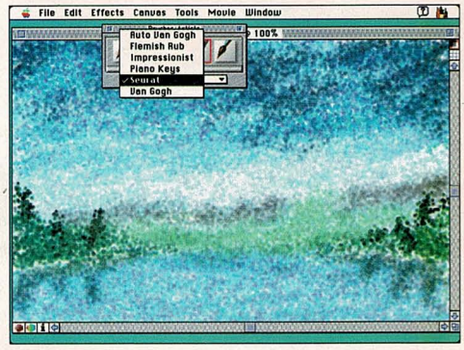
Fractal Design's *Painter* made it easy for anyone with a Mac to achieve impressive 'Natural Media' paint effects, from charcoal and chalk to watercolour and airbrush. The brand new version 3.0 (reviewed this issue on page 56) packs even more features into the package, giving you the power to do just about everything you could do with real media – without the mess!



You work on a screen designed to resemble a drawing table with a set of 'drawers'. These give you access to an impressive selection of tools and materials that emulate their real-life counterparts – various types and thicknesses of paintbrush, chalks, felt pens, the lot. You can use these on different 'paper textures', and then 'clone' what you have done, add masks or colour filters, or apply several effects and distortions. For example, you can apply a 'water' effect to blur and soften the image or even a 'lighting' setup that reproduces the effect of viewing the image under light of a particular hue and intensity coming from a particular direction. The range of possibilities is dazzling – but to keep things manageable, you can select your favourite tools and keep them within easy reach on the drawer fronts.



But that's not all! The new version 3.0 adds still more fantastic capabilities. The 'Image Hose' enables you to lay down copies of a selected image wherever you choose. You can generate 'floating' layers that can be moved independently of the background, or transparent 'Onion Skin' overlays that make animation a snap. You can 'rotate' your working page, just like a drawing board, and even export your work as a *QuickTime* movie!



Painter 3.0 costs £440, but we have five copies to be won, courtesy of Letraset. To enter, just answer the three easy questions below and send us your answers on a postcard or the back of a stuck-down envelope. Employees of Future Publishing, Fractal Design, Letraset and associated companies, and their families, are not eligible to enter. No multiple entries are allowed, unless they are painted on canvas. Please state if you don't want your name added to a mailing list. The editor's decision is final, and the closing date is Friday 13 January.

THE QUESTIONS

1. What does the interface of *Painter 3.0* resemble?
(a) A work desk with drawers
(b) A drawing board with parallel-motion ruler
(c) An artist's palette with little blobs of paint you can mix

2. Which of these is *not* one of the new features in *Painter 3.0*?
(a) Bristle Modelling
(b) Floaters
(c) Blue Smarties

3. What is the new tool in *Painter 3.0* that 'sprays' copies of a selected image?
(a) Image Hose
(b) Picture Spray
(c) Cut-and-Paste

Need help? Check the review on page 56! Then send your entry (remember your address) to: 'Improve your Image, Jose' Compo, MACFORMAT, 30 Monmouth Street, Bath BA1 2BW.

0800 765432

16GB turboDAT £884

inc Retrospect 2.1, installation kit

MacUser Awards 1993 WINNER

4-16 triple DAT £998

tape	external	media
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Best Buy MacUser

Since our DAT was a 5-mouser best buy, we've doubled the buffer size for even smoother backup, doubled the speed and doubled the capacity! No wonder it won the best peripheral category of the MacUser awards! Full compatibility with DDS1 standard drives (2GB and 2-8GB). Power Macintosh optimised. The even faster triple DAT is capable of over 35MB/minute. Choice of enclosures. Tape, cleaning tape & cables included.

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£59 installed free on your new drive

hard	disks	seek	int/ext
260	12		£142/216
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500	12		£184/254
700	12		£252/326
1000	8.5		£422/498
2000	9		£748/838
4000	9		1568/1648
9000	10		2580/2680

seek times are average, "effective" seek times are all faster. All drives are fast SCSI2.

Our 1000MB drive outperformed every other 1GB drive in MacUser's gigabyte drive test. Real world performance of all the other 1 Gb drives tested was up to 130% slower. Yet none had a lower cost per megabyte.

Upright "F" enclosure option:

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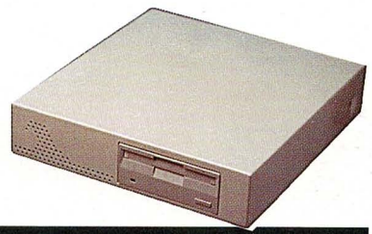

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Nearly double the capacity and transfer rate of the 128 drive. Full 128 compatibility with no performance degradation. Ask for our data sheet: "Choosing an optical drive". Power Macintosh/System 7.5 ready. Choice of mechanism.

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prices include disk	drive	media
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88/44Mb Syq	£336	£54
200MB Syquest	£454	£65
270MB Syquest	£448	£53
128Mb Optical	£498	£19
230MB Optical	£598	£28
1.2/1.3GB MO	1398	£64

98% of orders shipped from stock. All external drives (except 105/270 Syquest) have 90-270V power, twin 50 way SCSI, pushbutton ID switch, platinum grey "zero footprint" aluminium housing. External drives include UK mains cable, SCSI system cable, terminator, software, 1 piece media.

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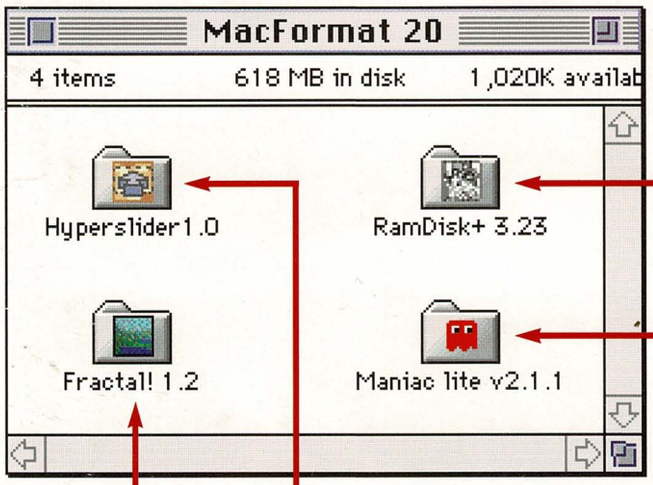
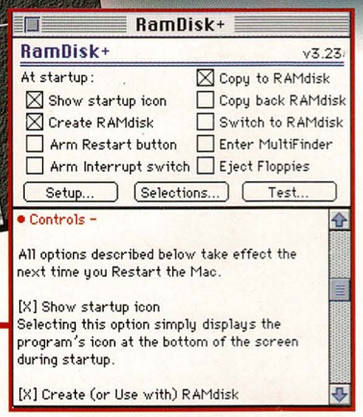
MACFORMAT

ON THE DISK THIS MONTH...

Virtual reality on a floppy? They said it couldn't be done, but we have a couple of great programs to get you started. If you get exhausted visiting fantastic worlds, then sit back and relax with a great PacMan-type game.

MACFORMAT
DISK 20
JAN 95
Fractal! 1.2
Create your own realistic three-dimensional landscapes in this superb free graphics program. Mountains, seas and sky are at your control!
Maniac 2.1
One of the all-time classic games just got better! Play this addictive game, then read the author's own account in the magazine of how it's all done.
HyperSlider
Don't just create new worlds, explore them too! With this program you can link pictures together to create a professional interactive walkthrough of any environment.
RamDisk+
Create a super fast extra 'disk drive' on your Desktop! This RAMdisk offers the most features we've ever seen, including automatic copying of files to the RAMdisk at startup.
See back cover of magazine for more details & compatibility information
OVER 2MB OF GREAT SOFTWARE!



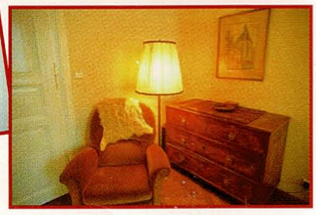


RAMDISK+ 3.23

A RAM disk is a super-fast extra disk drive created out of thin air, and this is the best we have seen, with a wealth of advanced features such as the ability to copy files automatically to the RAM disk on startup. An essential for anyone who wants speed up their Mac. Requires: Any Mac

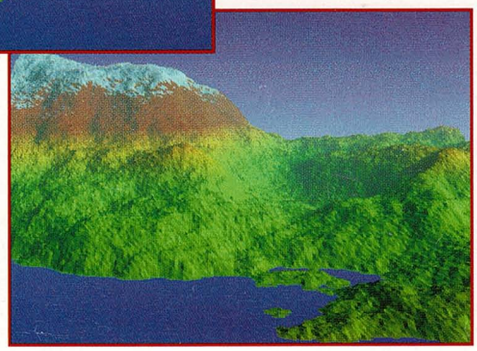
MANIAC 2.1.1

One of the best games ever has just got even better! Programmer Alex Metcalf created this version of his superb game especially for us. Once you've enjoyed playing it, read his own account inside of how it's all done. Requires: LC or better, System 7.0 or later, 256-colour 14-inch monitor, 1.9Mb free RAM



FRACTAL! 1.2

Whole new worlds are just a mouse-click away with this gem of a program! Produce your own stunningly realistic landscapes with complete control over level of detail and colour scheme. So if you fancy a dip in a purple sea, this is the program for you. Requires: Colour monitor, 2.5Mb free RAM



HYPERSLIDER 1.0

An easy-to-use but incredibly powerful program to create your own interactive slideshows. Links pictures together in any way that you please to produce walk-throughs of any environment you choose. Try it with your *Fractal* landscapes! Requires: System 7.1 or later